American MILK REVIEW

AMERICAN MILK REVIEW BUTTER REVIEW EGG & POULTRY REVIEW

JANUARY, 1946

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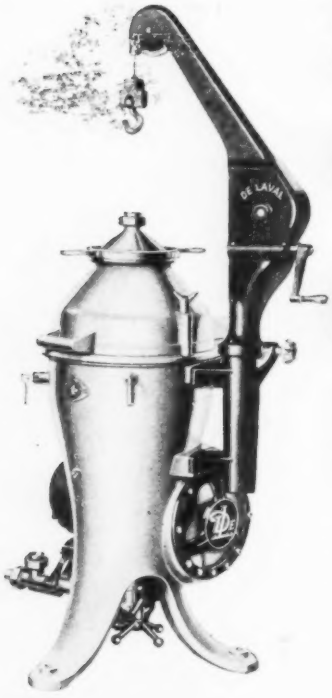
Here They Are ....

THE NEW Stainless Steel

EQUIPPED DE LAVAL "Air-Tight"



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They're here again . . . De Laval "Air-Tight" Cream Separators and Milk Clarifiers with all parts having contact with the product made of stainless steel. Those manufactured and in use before the wartime shortage of stainless steel forced discontinuation of production have proved themselves in every way . . . and we are pleased to announce that we are again building these great stainless steel equipped De Laval "Air-Tights."

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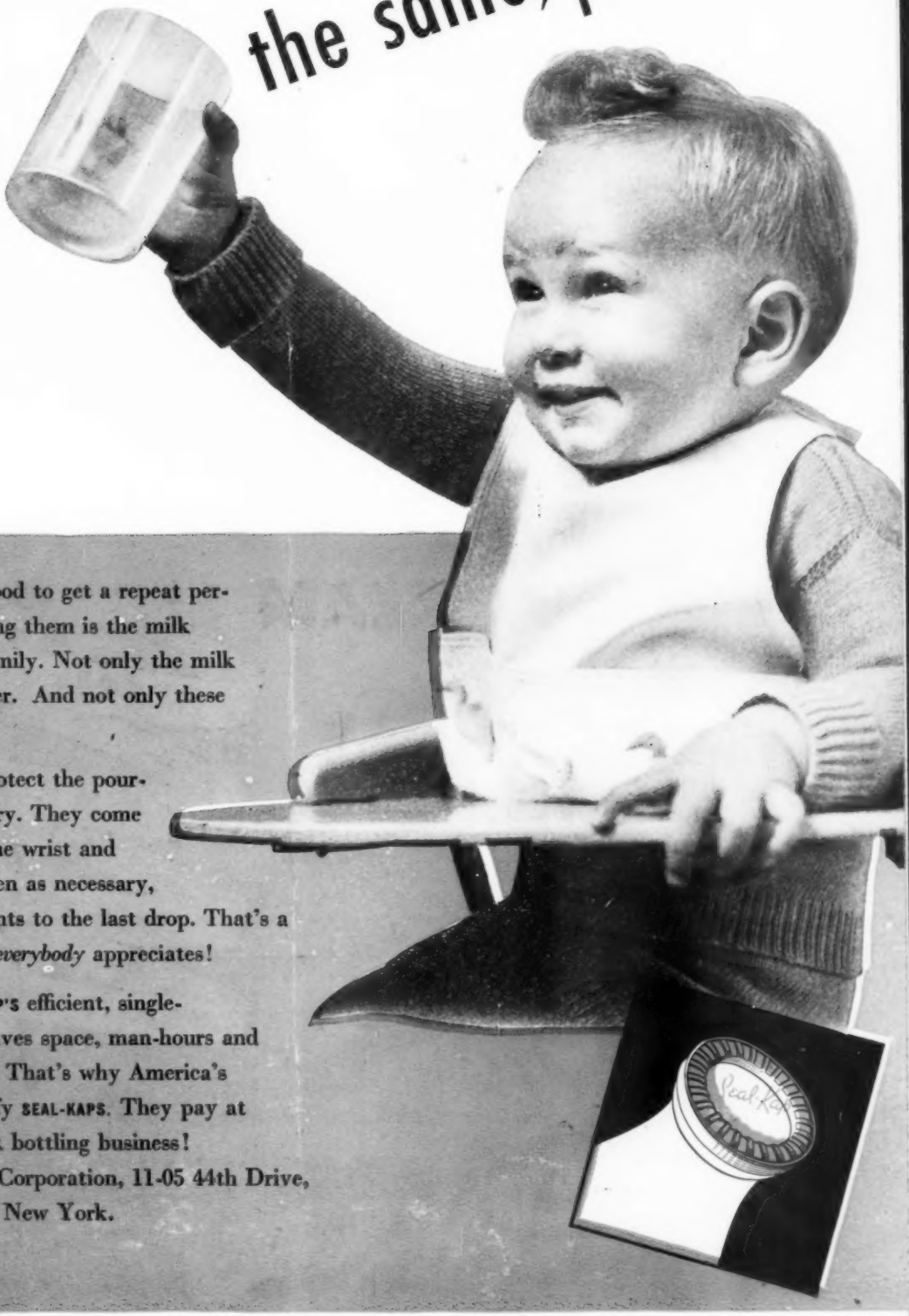
DE LAVAL

"AIR-TIGHT" CREAM SEPARATORS AND MILK CLARIFIERS

. . . STAINLESS STEEL EQUIPPED

more of the same, please



Things have to be good to get a repeat performance. And among them is the milk mother serves the family. Not only the milk itself but its container. And not only these —but the cap, too!

SEAL-KAPS not only protect the pouring lip during delivery. They come off with a twist of the wrist and snap on again as often as necessary, protecting the contents to the last drop. That's a repeat performance *everybody* appreciates!

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AMERICAN MILK REVIEW

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Proposes Butter Price Rise

Secretary of Agriculture Anderson Reported to Advocate Increase of Eighteen Cents in Ceilings by May 1st With Dairy Subsidy Off— OPA Oppose Move

WASHINGTON, D. C.—Press reports emanating from here within the past few days indicate that Secretary of Agriculture Clinton P. Anderson has arranged a series of proposals, to the governmental agencies involved, designed to correct marked disparity in butterfat prices to the producer, which during the past several months have served to drain whole milk and cream away from the country's churns to a tremendous degree, and which have cut the country's butter supply down to the lowest volume in modern times.

The existing condition of acute disparity in the dairy price picture has long been an object of grave concern among competent observers and members of the country's varied dairy businesses, and governmental action better to equalize butterfat prices in various channels long has been strongly sought.

Press reports coming from here, said to be based on information furnished by an aide of Secretary Anderson, state that he has recommended an increase in the butter ceiling price of 6c per pound by February 1, and an added increase of another 12c to become effective by May 1, when the dairy production subsidy program is scheduled to be terminated.

End of the dairy subsidy program, first stated as a major objective by Secretary Anderson as soon as conditions warrant, has already been started with the elimination November 1 of the 5c per pound production benefit payment paid creameries out of government funds. The cheese production subsidy of 3.75c per pound is scheduled to go off soon, and the general dairy production benefit payments, which have been running reportedly to about $525,000,000 a year now are said to be due for ending by May 1.

Meets Varied Response

The entire readjustment program, as reportedly advocated by Secretary Anderson, is meeting a highly variable response in dairy circles. It also reportedly is tied in with ceiling price imposition or reduction on cream sold in fluid channels and on cream going through other manufacturing outlets, notably ice cream, cream cheese, etc.

It has been the impact of the tremendous demand for fluid milk and cream since the lifting of sales and manufacturing quotas, and the general removal of the prohibition on the sale of heavy cream in fluid channels, which has been chiefly reponsible for the dwindling butter supply. Butterfat being churned,—which is regulated by ceiling prices on the finished product,—in most of the main butter belt does not give the producer a return of about better than 56c per pound. However, the tremendous call for cream for fluid and other manufacturing outlets, freed from regulation as to price and quantity, has boosted paying rates at the producer level to 80@90c and even $1.00, per pound.

Under these conditions it is difficult to understand how any butter is being made at all in commercial quantity. As a matter of fact, for weeks past the average production shrink from the same time last year, when the make was relatively light, has probably equalled 25 per cent or more, according to the weekly USDA estimates.

Any proposal by government officials to re-impose ice cream production quotas and limit cream prices sold fluid basis and to manufacturing outlets other than creameries, are drawing sharp protests from the manufacturing and fluid milk and cream distributing groups involved. These protests, however, seem shortsighted in view of the essential nature of the butter industry in the balancing, in normal times, the year-round business of dairying.

Bowles in Opposition

Also on the opposing side, according to press reports, is OPA Administrator Chester Bowles who is reported to have stated that he would fight all out against permitting any increase in butter ceiling prices as proposed.

How the entire matter will come out remains to be seen. In view of the extremely broad demand for fluid milk in consuming channels, and the great importance of maintaining this at its maximum possible volume, most impartial observers believe that butter should be brought further back into the picture as being a staple product of high nutritive value, extremely important in maintaining public health and a properly balanced diet.

It is likewise felt in many quarters that ice cream manufacture, under existing conditions, should properly be curbed to some degree as far as volume of the make is concerned, until such time as whole milk production becomes adequate to supply the entire dairy group.

Also, it is strongly felt by many that re-imposition of the general ban on sales of heavy cream in fluid consumptive channels should immediately be effected, since of all the dairy lines this can reasonably be considered as a luxury product, and one whose use can very well be curtailed during a period of emergency, when supplies of whole milk for all outlets are at the lowest seasonal volume.

FOR MAXIMUM VALUE ROUTE THIS ISSUE THRU YOUR ORGANIZATION:

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QL 391 C5 A521

Hearing Scheduled

Presentation of Evidence to Be Taken on Pricing Revisions to Metropolitan New York Milk Order

To assure proper pricing in the Metropolitan New York marketing area of an anticipated heavy production of milk during the 1946 flush season, cooperative associations of milk producers and handlers in that area have requested a public hearing on proposed amendments to the New York Milk Order (No. 27). The proposals include revisions of the pricing of the so-called manufacturing classes of milk as well as raising of the Class I-A (fluid milk) price in anticipation of the time when federal subsidies paid milk producers will cease.

The hearing, called by both the U. S. Department of Agriculture and the Department of Agriculture and Markets for the State of New York, will be held at 10 A.M., January 17 at Brooklyn in the St. George Hotel, January 21 at Watertown in the South Junior High School, and January 22 at Syracuse in the Onondaga Hotel.

The hearing will be confined almost entirely to presentation of evidence on revision of all class prices, leaving other matters for consideration at a later date. However, the hearing will also deal with definitions of milk classes, certain class butterfat differentials, and payments or credits to handlers on storage cream subsequently used in certain lower priced classes.

Major Proposals

Major proposals included for hearing are:

1. That the present Class I-A price of $3.70 be increased by an amount sufficient to assure an additional return to producers equal to the return from subsidies during 1945. This additional amount would be offset by reductions to compensate for the amount of subsidies which producers may continue to receive. Considering the seasonal variation feature in the proposal, it amounts to a proposed Class I-A price of $4.66 from April through September and $5.06 from October through March.

2. A second Class I-A proposal for a price of $4.63 from April through July, and $5.10 from August through March. It is also proposed that there be an extension of the table in Class II-A (cream) price formula to permit a price on milk used for cream higher than the present maximum price of $2.70 per hundredweight.

3. A reduction in the price paid producers for Class III milk (chiefly evaporated milk and milk powder) moved from fluid plants to manufacturing plants, and a so-called "posting and auction" plan for milk used in Classes IV-A (butter) and IV-B (cheddar cheese). This latter proposal, producers say, is designed to assure utilization in the 1946 flush season of anticipated remainders of excess milk by providing a method of permitting its manufacture into butter and cheese at prices somewhat less than the established prices for these commodities.

4. An increase on all classes of milk to compensate for the loss of subsidies, plus a premium of 35 cents on all classes from July through March—the months of lowest production.

5. An increase on all classes of milk other than fluid milk and cream at the rate of 60 cents during October, November and December and at the rate of 20 cents for the rest of the year exclusive of April, May and June.

6. A reduction in the Class II-B (New York City ice cream and storage cream) price to bring it in line with prices paid by competitive dealers.

7. A reduction in the Class IV-B (cheddar cheese) price to provide manufacturers with a larger allowance to cover manufacturing costs.

SOY BUTTER IN OLEO CLASS

Detroit, Mich.—According to a federal court ruling here soybean butter, like any other yellow oleomargarine, is a dairy product substitute and subject to the federal 10 cent per pound color tax.

Judgment was entered by District Judge Edward J. Moinet in favor of the Commissioner of Internal Revenue in a suit which had been brought by Howard O. Butler, manufacturer of soya butter. The plaintiff, Butler, contended, among other things, that his product did not come within the definition of oleomargarine as defined by federal statute, and that the law is unconstitutional as a discrimination against a legitimate business.

Judge Moinet held that the product had the color, texture, flavor and general appearance of dairy butter and was produced in imitation of butter.

JOS. X. GUBBINS PROMOTED

Joseph X. Gubbins has been promoted to the post of midwestern sales manager of the Paterson Parchment Paper Company, it was announced by E. R. Leonhard, vice president in charge of sales at the company's general office in Bristol, Penn. The appointment became effective December 6th.

Mr. Gubbins has been with the Paterson organization since 1921 and is well known in the Midwestern territory. He will make his headquarters at the Chicago office of the company at 111 West Washington St.

DDT for Dairy Barns

Professor H. H. Schwardt of Cornell Reports on Experimental Application of Insecticide Against Flies

That DDT can be used effectively against flies in dairy barns has been shown experimentally by Prof. H. H. Schwardt of the entomology department at Cornell.

Three pounds of actual DDT to a hundred gallons of spray were used this summer on several dairy farms and applied with a fifty-gallon orchard sprayer operating at 375 pounds pressure.

"Small garden sprayers give excellent results," acknowledged Dr. Schwardt, "but power equipment gives greater speed and penetration. Penetration is important in barns heavily hung with cobwebs and their included trash."

Application to the point where the spray runs off walls and ceilings kills flies for two months; one application in late May and another in late July suffice for the entire fly season in central New York.

DDT has not been used in milk plants experimentally, and if tried should be carefully done because dead flies will fall continuously from the ceiling, Dr. Schwardt warned.

He noted that DDT sprays made from wettable powders are cheapest. In pure form, the DDT is a white crystalline material that will not dissolve in water, but may be dissolved in benzene, xylene, kerosene, and other organic solvents. Professor Schwardt does not recommend a solution in an oil if used around animals because it is absorbed rapidly through the skin. But DDT can be suspended in water by adding a wetting agent, and in this form can be used safely on animals.

WINS BORDEN SCHOLARSHIP

Lafayette, Ind. (EB)—W. J. Harper, a senior majoring in dairy manufactures at Purdue University, has received the Borden agricultural scholarship award of $300. A discharged veteran who was seriously wounded in the European theater, he compiled a grade point average of 4.97 for six terms of study. The next nearest had a point average of 4.62. The scholarship was made possible by the Borden Company of New York, which made available $1,500 with the understanding that five annual scholarship awards of $300 each would be made by the university providing a student outstanding was available. Harper is the first winner.

Oskaloosa, Kan.—The Beatrice Creamery Co. recently began erection of its new milk plant here.

Editorially Speaking....

More Bureaucratic Bungling

DURING the entire war period the butter manufacturing and distributing industry has been placed behind the 8-ball by governmental regulations probably to a greater degree than any other foodstuffs group. Even during that long period of the war emergency when the provision of fully adequate supplies of the creamery product for armed force and related use could not possibly be reasonably criticized, the production and price control mechanisms imposed worked wholly unnecessary havoc with civilian volume and the entire distributive set-up, both in the forced unnatural methods of its operation and in the inadequate margins of price mark-ups in the various branches of the business. Many of these latter, as is well known, did not even permit covering the costs of operation.

And with the coming of peace and the removal of the set-aside programs, conditions went rapidly from bad to worse. Fluid cream prices at the producer levels,—uncontrolled by ceilings,—were rapidly bid to fantastic levels by the bursting of the dams holding in check a vast potential demand, not only from the suppliers of heavy cream to the hungry public, but as well from the makers of ice cream, cream cheese, etc.

With the weekly make of butter squeezed down to probably less than three-quarters of the volume of the same time last year for many weeks, the seriousness of the position from every standpoint – dairy industry and consumer alike – is strikingly clear.

Just as we go to press, reports come from Washington that Agricultural Secretary Clinton P. Anderson is proposing an increase between now and May 1 of 18c per pound in the butter price ceiling as an aid to stimulating production. This proposal,—not officially confirmed, as far as we know, by Secretary Anderson himself,—is meeting with the strongest opposition from OPA Administrator Chester Bowles and representatives of consumer groups at large.

There is certainly no assurance that any such proposition, even if coupled up, as reported, with an effort to reduce the ceiling prices on butterfat used in other channels, could be effective in the desired direction, or would be possible of any degree of enforcement.

It seems to us that the only sure means of bridging the current gap during the lowest milk producing season, and providing an adequate supply of whole milk for all major dairy products while at the same time maintaining the freest possible use,—tremendously desirable,—of milk in fluid form, would be to reimpose the ban on the nation-wide sale of heavy cream in fluid outlets for consumption, to reduce ceilings—which have never been on a dollars-and-cents basis,—on dry whole milk, and reimpose for a temporary period reasonable quota restrictions on the manufacture of ice cream.

Certainly it is inconceivable that during this long period when price inequalities have been robbing the churns, governmental agencies have not taken some action to bring into better alignment the butterfat return in various outlets.

To point this view up, where the authorities slipped on this operation was in prematurely freeing heavy cream from the fluid sales ban and lifting the quotas on ice cream and cream cheese manufacturing volume. After all, it is a poor observer, and a wholly selfish milk dealer and milk products operator, who would lose sight of the absolutely essential niche that the butter industry fills in the entire dairy scene, and from the angle of proper national nutrition.

Coming Technological Improvements

WHILE war with its insatiable demands and devastating effect temporarily greatly impairs the normal operations of practically every peacetime industry, there is some compensation due to the fact that many wartime developments are adaptable to peaceful pursuits of industry. Technological improvements in the field of mass production, new inventions, refinements in machinery and equipment, new metals and alloys, and the ingenuity of scientists in many other directions, all, either born or accelerated under the impetus of war, make themselves felt constructively in the peace time era that inevitably follows war.

Justifiably the dairy industry and the trades allied with it may pride themselves on past achievements in developing equipment and methods for processing and manufacturing high quality dairy products; but still it seems most likely that in the future there will be still greater improvement along mechanical lines to increase efficiency and enhance quality.

From investigations already made it seems almost certain that the dairy products plants of the future will have more stainless steel equipment or that made from some similar alloy. Likewise, automatic temperature and timing controls unquestionably will play a still greater part in standardizing and safeguarding high quality products as well as taking out risks inherent to the human element.

Costs for equipping the improved plant of the future unquestionably will be higher than pre-war, but when measured in terms of economical operation, efficiency and unit cost of production, they undoubtedly will prove to be good investments.

Support the Red Cross

WITH ALMOST half the population of the United States consisting of servicemen, ex-servicemen, and their dependents, many war-related activities of the American Red Cross must be continued far into the future. In carrying out such a program, the work of Red Cross volunteers,—who numbered some 3,000,000 when the war ended,—will continue to be of great importance.

Red Cross Gray Ladies, along with members of the Arts and Skills Corps and Nurses Aides, will continue for some time to assist paid Red Cross hospital workers. Volunteers will aid Red Cross Home Service professionals in handling the problems of servicemen and veterans and their families, and in assisting veterans filing claims for government benefits expected to reach a total of at least 1,000,000.

The services of Red Cross volunteers

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wil be needed in the welfare programs carried out by their home communities. Red Cross emergency closets, prepared to supply clothing to disaster victims and others in need, are filled by the continued efforts of members of the Red Cross Production Corps. And staff assistants, Motor Corps drivers, and Canteen Corps volunteers will contribute to their community programs, as well as to the nation-wide effort of the American Red Cross.

And in case of disaster, Red Cross volunteer members of the Motor Corps, Canteen Corps, nurses' aides and others must be prepared for immediate action.

Dairy industry members, together with all others, may be expected to support the Red Cross campaign for funds to the extent of their maximum ability.

March of Dimes

NOW IN ITS THIRTEENTH YEAR, the National Foundation for Infantile Paralysis will conduct its annual March of Dimes appeal during the period January 14-31.

So well recognized are the contributions of this worthy institution to human welfare and to the relief of a dreaded affliction, that Americans of all ranks in life repond admirably each year to the appeal for funds necessary for a continuation and expansion of this noble work. The support thus given enables the Foundation successfully to carry on its fight for the eradication of virulent infantile paralysis and to restore those unfortunately stricken, to health and usefulness.

When we contribute our dimes or dollars to the work of the National Foundation for Infantile Paralysis we can do so with the assurance that we are actively participating in an effort to relieve suffering, to restore the afflicted to health and to eliminate a most devastating disease.

To what more worthy cause could we contribute?

An Infectious Smile

BUBBLING OVER with health and happiness, – that's the impression conveyed by the smiling countenance of the robust youngster pictured on the front cover of this month's issue of the "Review".

And good reason there is for his infectious smile and physical appearance. Milk in liberal quantities, unrivaled by any other food for health and growth-producing qualities, supplies the answer.

This picture, which tells an effective story in an appealing manner, is one recently used in a series of advertisements by the Northland Milk and Ice Cream Company to keep the firm's name and its products to the fore in the minds of Minneapolis milk consumers. By using photographs of children and the mothers who are customers of the firm much good-will and favorable comment results.

Hartford Meeting

Connecticut Dairy and Milk Inspectors Hold Two-Day Sessions to Discuss Leading Technological Subjects

For two days, January 8 and 9, the Connecticut Association of Dairy and Milk Inspectors convened for their annual meeting at the Hotel Bond in Hartford. This meeting, open to the milk trade as well as to the dairy and milk inspectors, was well attended. The program was well balanced with an excellent presentation of papers by authorities on subjects pertaining to dairy and milk plant sanitation, quality control, processing of dairy products, and technological reviews of the current milk and food situation.

The following papers were presented:

Dairy Section

Quality Control of Milk for Pasteurization–H. Clifford Goslee, Executive Assistant to Dairy and Food Commissioner; Discussion–John S. Seremet, Supervisor Field Services, Connecticut Milk Producers' Association.

Basic Principles of Milk Plant Quality Control–Dr. David Levowitz, Director, New Jersey Dairy Laboratories, New Brunswick, N. J.; Discussion–Prof. E. O. Anderson, University of Connecticut; G. W. Molyneux, Director, Division Milk Sanitation, Westchester (N. Y.) County Department of Health.

Connecticut Plan for Control of Milk Adulteration–R. A. Haines, Dairy Inspector, Dairy and food Commission; O. C. Sieverding, Assistant Director, Bureau of Laboratories, Connecticut State Department of Health.

Food Section

The Use of D. D. T. as an Insecticide–LeRoy W. Van Kleeck, Principal Sanitary Engineer, Connecticut State Department of Health.

Reciprocal Exchange of Inspectional Information on Food Plants–R. M. McLaughlin, Director, Division of Sanitation, Westchester (N. Y.) County Department of Health.

Forecasting Food Sanitation – Harold Clark, Supervisor – Foods, Dairy and Food Commission; Dr. A. L. Burgdorf, Health Officer, City of Hartford; Charles B. Barr, Secretary, Connecticut Bakers' Association.

Joint Session

Polyphosphates in Food Plant Sanitation–Arthur H. Razee, Chief, Technical Service Department, Rumford Chemical Works, Rumford, R. I.

Nutritional Values–Dairy and Food Products–Dr. Arthur D. Holmes, Amherst, Mass.

Review of New Laws, Rules, and Regulations–John J. Sweeney, Dairy and Food Commissioner.

Following the first day's sessions a banquet was held at the hotel which was featured by a splendid program of entertainment and guest speakers.

FOR E. O. D. DELIVERY

Herman I. Miller, Senior Extension Economist, USDA, in a discussion of the subject of every-other-day milk delivery on the ADA radio program, The Voice of the Dairy Farmer, recently stated that daily deliveries would necessitate a price increase of 1 to 2 cents a quart to consumers, which does not include federal subsidies. He pointed out that return to daily delivery would necessitate the operation of one-third more retail routes and that each driver-salesman would deliver about 25 per cent less milk. The driver also would make about 40 per cent more stops, and would earn smaller commissions and less pay, according to Mr. Miller.

WALTON FIRE DESTROYS PLANT

Walton, N. Y.–Fire of undetermined origin wrecked a large concrete building that housed the powdered milk plant of Breakstone Brothers Creamery here recently, resulting in damage estimated at more than $100,000. Efforts of the Walton and Delhi firemen were successful in saving the boiler room of the creamery, attached to the southern end of the building. This enabled the creamery to continue operation of its main processing plant.

BEADLING REJOINS JOHNSTON

Appointment of James M. Beadling as California and Nevada representative for the chocolate and cocoa division of the Robert A. Johnston Company has been announced by William G. Manschot, manager of the division.

Mr. Beadling, who represented the Johnston chocolate and cocoa division in Oregon, Washington and Idaho before the war, is thoroughly familiar with all Johnston products and services.

JOINS CONTROLLERS INSTITUTE

Carl L. Schmid, controller of the Sheffield Farms Company, Inc., New York City, has been elected to membership in the Controllers Institute of America. The institute is a technical and professional organization of controllers devoted to improvement of controllership procedure.

HOW TO SELL YOUR VITAMIN D MILK

with a laugh!

Sure-fire sales-getters are newspaper cartoons, now being used by many leading national advertisers. Cartoon sales messages arouse interest, build good-will, get high readership.

Now, you may use cartoons to help sell your Vitamin D Milk. By special arrangement, General Mills is able to offer a series of 36 outstanding cartoons, similar to the illustration here, complete with gag lines. All you need to do is fill in your name in the proper place. In addition, suggested selling copy blocks are furnished, for either regular or Homogenized Vitamin D Milk.

This cartoon series is just one of the many types of advertising available in the complete "Dollars for Dairies" conversion program for Vitamin D Milk. Why not write now for full information?

"I should have warned you about shaking hands with Willie. He's been drinking (Your Name) Vitamin D Milk."

"Tailor made" for your needs

General Mills, Inc.

Special Commodities Division

MINNEAPOLIS 15, MINN. 80 BROAD STREET NEW YORK 4, N.Y.

Quality in Dairy Products Keynoted at Chicago Meeting

Illinois Association Holds the 13th Annual Convention — Prominent Authorities Discuss Leading Questions Confronting Industry

CHICAGO, ILL. — Quality in dairy products from the cow to the consumer's table, was the keynote of the 13th annual convention of the Illinois Dairy Products Association at the Morrison Hotel, Chicago, December 10th, 11th and 12th.

Representatives of the state public health and agriculture departments and the federal food and drug administration, industry leaders and spokesmen for the various quality organizations talked, showed slides and pictures, and just plain pleaded, according to M. G. Van Buskirk, executive secretary of the association.

"Ours is a quality industry, with quality products," he said. "We have never sold, we have just stood behind the counter and let the people buy. They bought because they had confidence in our product, a confidence inspired by doctors, dentists, food and nutrition experts over the years. God help us if we let them down."

Next to "quality" the most important topic was the great increase in production as contrasted with prewar days. The concensus of opinion was that a good sales job was needed but that a new market was waiting in the home ice cream outlet and that furthermore, people were even more ready, willing and able to buy quality goods.

"It is quite possible that we even hold the key to the post-war prosperity," H. E. Strong, DuQuoin, retiring president said. "There is still the old saying, 'as the farm goes, so goes the nation.' Farming is the nation's biggest business, and dairying is so basic to our agriculture that five out of every six farmers are dairymen.

"If subsidies are reduced or taken off entirely, prices of some dairy products will go up and result in a loss of sales for certain items. However, the demand for butter still far exceeds production and that branch of the industry can absorb a part of any surplus that might appear because of such price increases. Ice cream production is high and demand is extremely good. Sales are being held down only because of the sugar situation. When sugar quotas are increased the sale of ice cream will increase tremondously."

More than optimistic was Owen M. Richards, manager of the American Dairy Association, who said: "Even today's record-breaking milk production of nearly 125 billion pounds a year may not be enough."

Richards pointed out that with war-restrictions removed on all dairy products, today's demand would be even greater while 8 million new brides, millions of new babies and the public's $125,000,000,000 savings were other aces in the hole for the dairyman.

Harold McLain, president of the Railway Ice Company, Chicago, recalled that the United States was hardly as wealthy as the rest of the world either in resources, wealth, population or history, yet we had outstripped them all because of the one ingredient no other nation had—the American businessman with his aggressiveness and initiative.

Gene Flack, "Sunshine Man" of the Loose Wiles Co., Long Island City, N. Y., declared that industry had learned more since Pearl Harbor than in all history. He predicted that since America has faced "unprecedent difficulties" ever since 1620, it would not fail now. "America has 35 per cent more productive capacity now than before the war," Flack said. "Our job is not to adjust production but to sell the entire output of American industry, which means 50 per cent more goods and services must be sold. We'll do it."

Employee-employer relationships received attention from two speakers. Irl C. Martin, Woodward Governor Co., Rockford, reviewed in detail the wonderful co-operation that has existed in his plant over a period of years.

"If it can be said that our government has any labor policy at all, it is that management and organized labor groups are to be given every possible opportunity for settling differences through voluntary collective bargaining," Paul A. Potter, Chicago, industrial relations specialist, said.

The convention closed on the note of quality at the final luncheon when J. O. Clarke of the Federal Food and Drug Administration, sounded the note of quality again, first congratulating the association for devoting so much of its time to that subject and ignoring competitive matters and other pressing operational subjects.

C. H. Parsons, Swift & Co., Chicago, told the butter manufacturers of a new sediment tester, demonstrating and explaining it in detail. H. C. Darger, Cream Quality Improvement Program, showed two excellent films, one for training new cream buyers, the other dealing with the products. Zean Gassman, Superintendent, Division of Foods and Dairies, State of Illinois, who recounted a test of the new Illinois laws, stated "What you need apparently is more education—or more concentration on the job."

Enos Huffer, chief dairy inspector for the State Department of Public Health, Springfield, set up the standards of milk quality as seen by the sanitation expert to open the milk dealers sessions. B. F. Whitmore, J. D. Roszell Co., Peoria, speaking for the industry, stated that sales promotion of fluid milk began with a healthy cow, and the product should be subject to sanitary handling and surroundings, rapid and exact inspection, simple and satisfactory grading, prompt pasteurization, correct storage and quick delivery.

Using slides to illustrate a discussion of trends in the ice cream industry, Prof. P. H. Tracy, Chief Dairy Manufactures, University of Illinois, based on a belief in increased consumption of the returning veterans, increased purchasing power, greater appreciation of the food value, people eating out more, and manufacturing and selling improvements. He called for better organization of plants with specific suggestions and urged new products, particularly new sweetening agents and vitamins, in producing ice cream.

J. H. Carothers, San Diego, Cal., a director of the Merchandising Institute of the International Ice Cream Manufacturers Association stated, "There is a definite trend toward, and there will be a great volume flow through packaged ice cream sales through retail food outlets, particularly the chain store. But the chain store competition means more producers, the larger chains will become processors, and reduced prices."

In the cheese manufacturers sessions, A. J. Riddle, Kraft Foods Co., presented the National Cheese Institute Quality Program and urged that all manufacturers participate. M. W. Hales, Chr. Hansen's Laboratory, spoke on "Cheese Starters" and development in that field.

The ice cream mix group took two full days discussing the expansion of the home ice cream market through retail food store sales. D. M. Hemb, Chicago, presented the topic and the discussion was led by J. C. Frehner, Chicago, retiring president.

Highlights of the social program were the fellowship and mixer hour and the annual banquet with a program of entertainment sponsored by the Boosters Association.

"Safety Center" ... for millions of milk and cream bottles

F. L. CADOU
Sales Manager

Standard Cap and Seal Corporation has attracted top men in the dairy field. Notable among them is Mr. F. L. Cadou, of Indiana University, whose experience in many phases of practical dairy operation goes back 20 years. His knowledge and experience are typical of the help available to you on capping problems.

HOW thick should the wax coating be on a closure? What happens under icing? Under hydrostatic pressure or immersion? Answers to these and dozens of other problems are at the fingertips of Standard Cap and Seal research scientists and technicians.

Ideas are their stock in trade. Their work has led to the development of outstanding types of closures . . . for instance, one notable for being tamperproof; another that gives thorough protection without the aid of an inner cap and is priced for even the most modest operating budget. And these people, too, have been responsible for such innovations as color combinations and name printing on the sides.

In fact, the entire Standard Cap and Seal Corporation is made up of people who think and act in the light of long dairy experience of their own—and in accord with up-to-the-minute dairy practices. The outcome has been that more and more dairies look upon Standard Cap and Seal Corporation as the source of the most effective and most attractive closures. A representative will be glad to call at your convenience.

STANDARD CAP & SEAL CORPORATION

1200 Fullerton Avenue ***Chicago 14, Illinois***

Ohio Sessions Set

State's Active Dairy Organization's Plan Varied Two-Day Convention at Columbus January 21 and 22

Columbus, Ohio.—Executive Secretary O. E. Anderson of the Ohio Dairy Products Association has announced that arrangements are now practically complete for the 29th annual convention of Ohio's dairy industry, to be held Monday and Tuesday, January 21 and 22, at the Deshler-Wallick Hotel in Columbus. This outline of activities, speakers, and topics to be discussed, is subject to a few minor changes, but the general pattern will be followed.

Convention headquarters will be on the mezzanine floor on the east side of the hotel. All general sessions will be in the main ballroom. Registration desks will be located in the mezzanine lobby. For those who have not registered by mail in advance of the convention, registrations and reservations for the luncheons and banquet may be made Sunday afternoon, January 20, and all day Monday.

The schedule of events follows:

MONDAY, JANUARY 21

Separate meetings for the Boards of Trustees of the: Ohio Milk Distributors Association; the Ohio Butter Manufacturers Association; and the Ohio Ice Cream Manufacturers Association; for the purpose of electing officers for 1946, and to select members on the board of Trustees of the Ohio Dairy Products Association for 1946.

GENERAL SESSION—Annual reports by President A. J. Good; Treasurer, T. Kline Hamilton; and Executive Secretary, O. E. Anderson.

Opening address on "Quality and Its Place in Our Dairy Future"' by Prof. H. W. Gregory, head of the Department of Dairy Technology, Purdue University, Lafayette, Ind.

LUNCHEON—Address on "Quality and the 1946 Eight-Point Program", by E. K. Berg, Telling-Belle Vernon Co., Cleveland, and chairman of the Ohio Eight-Point Dairy Production Program for 1946.

Panel discussion on "The Responsibility of Management in the Quality Problem", with the following discussion leaders in charge: for milk, Lynn F. Jennings, Dairymen's Ohio Farmers Milk Company, Cleveland; for ice cream, John H. Erb, Borden's Dairy and Ice Cream Co., Columbus; for butter, Neil Baker, Fairmont Creamery Co., Columbus; and for manufactured products, L. S. Holler, Telling-Belle Vernon Co., Cleveland.

Address on "The Federal Government Looks at Quality", by J. O. Clarke, Regional Chief of the Food and Drug Administration, Chicago, Ill.

ANNUAL BANQUET—Introduction of guests, officers of the Ohio Dairy Boosters Association newly-elected officers of affiliated associations, and the pesentation of an outstanding floor show. NO SPEECHES.

TUESDAY, JANUARY 22

Breakfast meeting of the Board of Trustees of the Ohio Dairy Products Association, for the election of officers for 1946.

GENERAL SESSION—Address, "Can Seasonal Production Be Leveled?" by Profil C. W. Pierce, Penn State College, State College, Pa.

Address, "Our Biggest Job", by Owen M. Richards, Manager, the American Dairy Association, Chicago, Ill.

Reports on the Ohio Dairy Products Research Program at Ohio State University, by Professors R. B. Stoltz, L. H. Burgwald, and Dr. D. V. Josephson.

Separate Sessions for Ohio Butter Manufacturers Association: Speakers to include K. L. Milstead, Food and Drug Administration, Cincinnati; Richard Larson, Ohio State University, Columbus; and others.

Ohio Ice Cream Manufacturers Association—Address on "Take a Look at an Iceberg", by G. W. Hennerich, Managing Director, Ice Cream Merchandising Institute, Washington, D. C.

Ohio Milk Distributors Association: Address on "Improving Employee Relationship", by Ray Millard of Paul Potter and Associates, Chicago, Ill., discussion of distribution efficiencies.

FINAL LUNCHEON—Address, "Government's Plans for the Dairy Industry", by Paul Quintus, Associate Director, Dairy Branch, U. S. Department of Agriculture, Washington, D. C.; followed by an open forum discussion of such topics as subsidies, farm price supports, marketing orders, etc.

Following presentation of the report of Resolutions Committee, the sessions will adjourn.

The Ohio Dairy Boosters Association will hold its annual meeting and business session and the afternoon of the opening day, with a talk, "Let's Get Acquainted," by Executive Secretary Anderson.

BERTRAND LOFTUS DIES

Abbotts Dairies Ice Cream Division Executive Passes at 51

Bertrand J. Loftus, Director of Sales and Advertising in the Ice Cream Division of Abbotts Dairies, Inc., Philadelphia, Pa., died suddenly on January 4th at the Misericordia Hospital in Philadelphia. He was 51 years of age.

Mr. Loftus spent most of his business life in the ice cream industry. He was formerly connected with the Smith & Clark Company, at Scranton, Pa., as Sales Manager. In 1937 he became associated with Abbotts Dairies as a salesman in that company's Allentown, Pa., branch. Two years later he was promoted to the position of Sales Manager of the Ice Cream Division, and in January, 1944, became Director of Sales and Advertising for that division.

He was a veteran of World War I and a member of the American Legion. He was also a member of the Elks, and active in the Advisory Council of the Ice Cream Merchandising Institute, affiliated with the International Associatioon of Ice Cream Manufacturers.

Mr. Loftus is survived by his wife, Loretta Heim Loftus; two brothers, William and Edward Loftus; and two sisters, Mrs. George Keller and Mrs. Peter Allen. Solemn Requiem Mass was sung in St. Peter's Cathedral, Scranton, Pa.

GRANDVIEW TAKES OVER UNIT

Akeley, Pa.—The Akeley Creamery, inactive for the past six or seven years, has recently been purchased by the Grandview Dairy Company of Brooklyn. Ambitious plans are being made by the new owners, who own and operate, as well, the creamery at Bear Lake. The old structure will be razed and a new building will be erected. It will be equipped with the most modern machinery for the handling of milk and with these new facilities it is the intention to process and ship a carload of fluid milk each day to Brooklyn.

Thos. P. Otto Dies

Founded with Brother George the Otto Milk Co. in Pittsburgh — Pioneered Developments in Milk Business

After an extended period of illness in a Pittsburgh hospital, Thomas P. Otto passed away January 9.

Tom, as he was familiarly known among his host of friends within the milk industry and fraternal circles in Pittsburgh, launched with his brother, George, The Otto Milk Company, which has grown since then to be the largest wholesale milk concern in the Pittsburgh market. The business was started with less than the proverbial shoe-string after both brothers had suffered a series of serious financial set-backs in the early twenties. However, with fortitude, perserverance, a high reputation for fair dealings in the past and a multitude of friends within the wholesale milk buying trade, the two brothers made a remarkable success with the business. The present plant is one of the most modern in the country with every facility for processing high quality milk and cream, and also for making fine ice cream mix that finds ready large-volume sale in Pittsburgh and other nearby markets.

Under the guidance of Tom and George Otto the company adhered strictly to a policy of selling wholesale and their efforts were confined solely to giving the finest quality with the best service to retail stores, restaurants, hotels and manufacturing-retailer ice cream concerns.

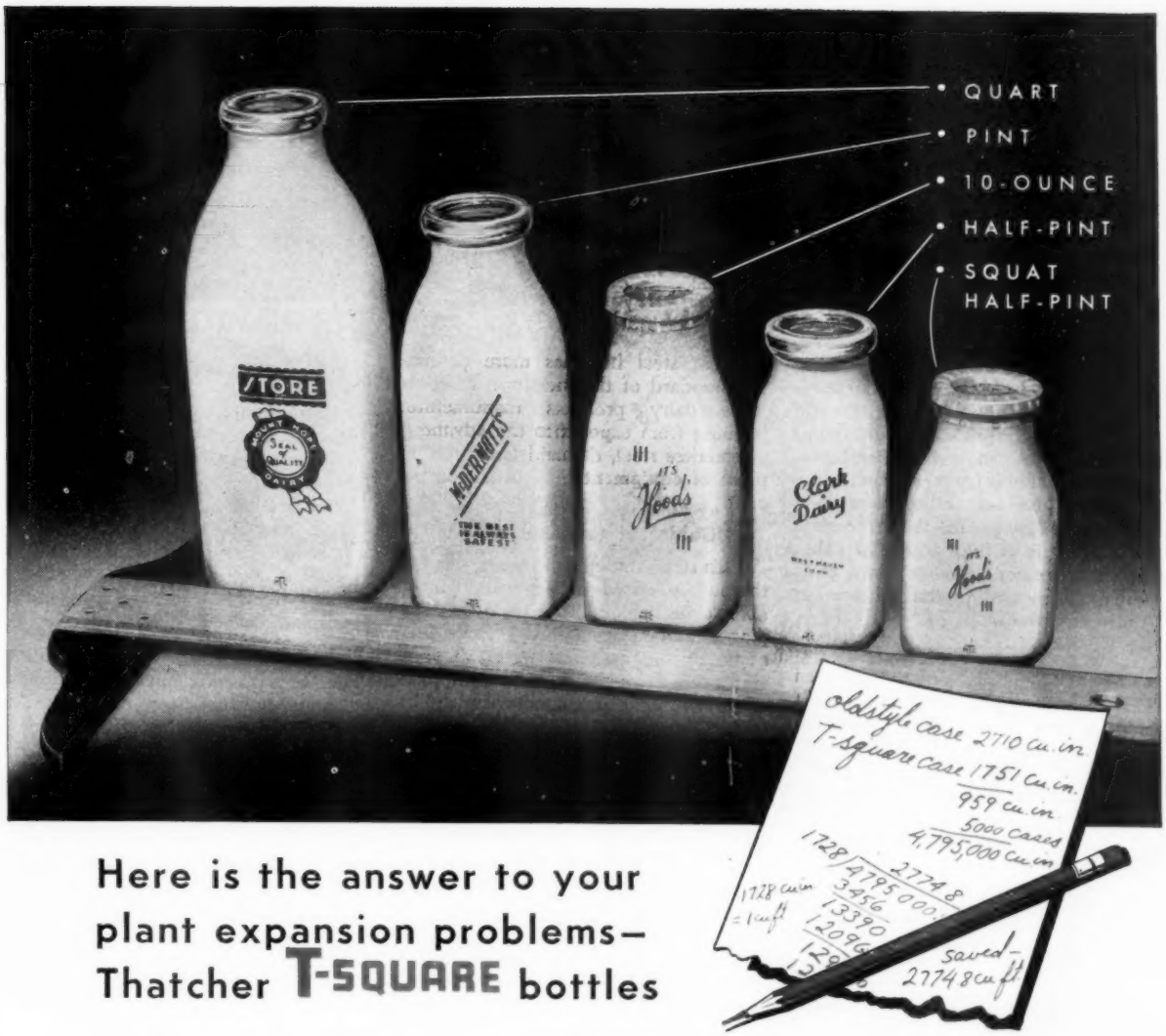
Pioneered Tank Transportation

Always a pioneer in new developments in dairy plant technique, Mr. Otto was one of the first to introduce the use of tanks for the transportation of milk by rail. This was worked out in conjunction with the B. & O. Railroad when Tom was associated with his father in the operation of the old Harmony Creamery Company which for many years was highly important in the Pittsburgh market.

Tom Otto had a quaint philosophy on life based upon his sense of right and justice that he applied constantly in his dealings with employees of the business. He knew every employee by their first names and each one was welcome to come to him with their personal problems and he gave freely both with advice and material assistance.

Surviving Mr. Otto are his wife, one son, who is associated with the business, and a daughter; also two brothers both in the milk business and two sisters.

Services were held at his home in Wexford, Pa., January 12.



Here is the answer to your plant expansion problems— Thatcher T-SQUARE bottles

It's simple arithmetic. Take a pencil and figure it out for yourself. Here are the facts:

CASE	ROUND BOTTLE	T-SQUARE	You save per case
Quarts	2710.12 cu. in.	1751.53 cu. in.	958.59 cu. in.
Pints	2562.30 cu. in.	1574.00 cu. in.	988.30 cu. in.
½ Pints	1774.00 cu. in.	1228.00 cu. in.	546.00 cu. in.

Multiply these savings by your daily case output. You'll soon see that you can increase your storage floor space by 50% by changing over to Thatcher T-Squares. Not only that, but you can increase your delivery truck capacity up to 63% per truck.

THATCHER
MANUFACTURING COMPANY
ELMIRA, NEW YORK

Look into the picture further. The cost of converting to Thatcher T-Square milk bottles is remarkably low. The installation will soon pay for itself. Be the first dairy in your community with T-Squares . . . write Thatcher today.

Stainless Steel in the Dairy Industry

Rust and Stain Resisting Metal Finds Highly Successful Application in Processing Milk and Other Dairy Products

The following material, presented by the Allegheny Ludlum Steel Corporation, includes up-to-date authentic figures on the prospects and equipment problems of America's dairy industry, especially derived from authoritative recent data and researches conducted by leading figures in the industry. As a study it is of high potential value to the management of dairy and milk product plants and to the fabricators of their equipment.

STAINLESS STEEL, in the past ten to twenty years, has proved itself particularly suited for equipment coming in contact with milk. The accent on stainless steel today marks it as the dairy industry's chief ally in the winning of a long-time struggle for maximum quality and purity of product, and utmost economy of operation.

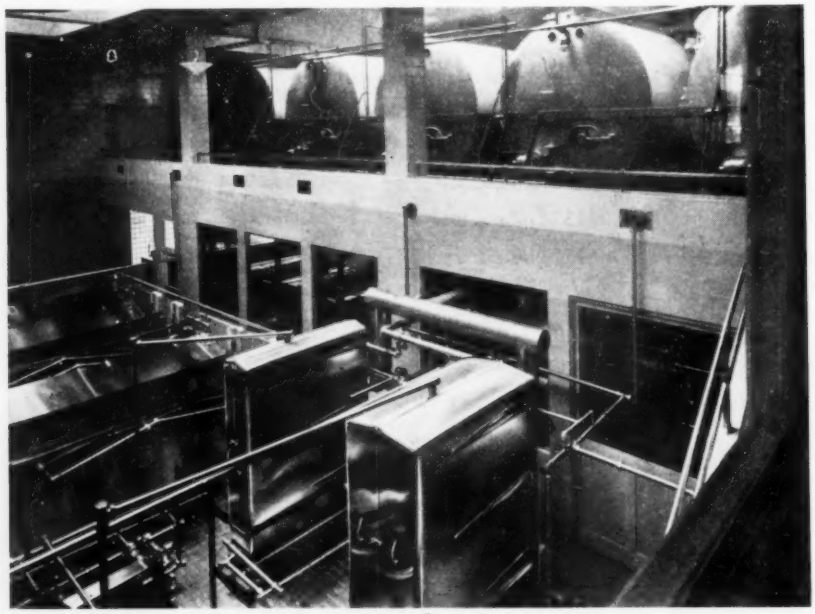
Other metals have been and are being used in dairy equipment. Other metals will continue to be used for some dairy equipment. But with each passing year, stainless steel becomes more definitely the standard of the industry. More and more dairy products manufacturers, learning from experience the advantages of stainless steel, demand that each new piece of equipment they install be built of it.

Subjected to Torture Tests

This steel, through the years, has been thoroughly tested under every conceivable condition in thousands of dairy plants. These tests have been severe. Some of the early stainless equipment was even deliberately abused in plants of dairy products manufacturers who had to find out just what it could "take" before they installed more equipment of the same material. Stainless "took it", and the rush to stainless was on.

Industry's Needs Unusual and Exacting

The handling and processing of milk offers some unusual and peculiar problems to the dairy products manufacturer and his supplier of equipment.



From Storage Tanks to Fillers Stainless Steel Finds Excellent Application

Stainless Steel Batch Pasteurizers

It's highly perishable, and must be processed and cooled promptly. It is delicate in flavor and readily picks up flavors and odors from equipment or surrounding air. Moreover, in some of its product forms or stages of processing, it contains lactic acid in considerable quantities; and therefore produces undesirable reactions unless the metal with which it comes in contact is, like stainless steel of the 18-8 types, completely resistant.

In addition, all equipment coming in contact with milk must be scrupulously clean and sterile. Since milk is the "most nearly perfect food" for humans, it is also ideal as a food for bacteria. The cleaning chore in a dairy plant, consequently, is a tremendous task—one requiring plenty of scrubbing and scouring and the use of detergents that are too strong for some metals. The cleaning-up job in the average milk pasteurizing and bottling plant takes more time than the actual processing. After each operation every piece of equipment must be thoroughly cleaned; every machine, pipe and fitting must be dismantled, scrubbed, sterilized, and reassembled before it can again be used. It's a constant, never-ending fight against bacteria in a dairy plant.

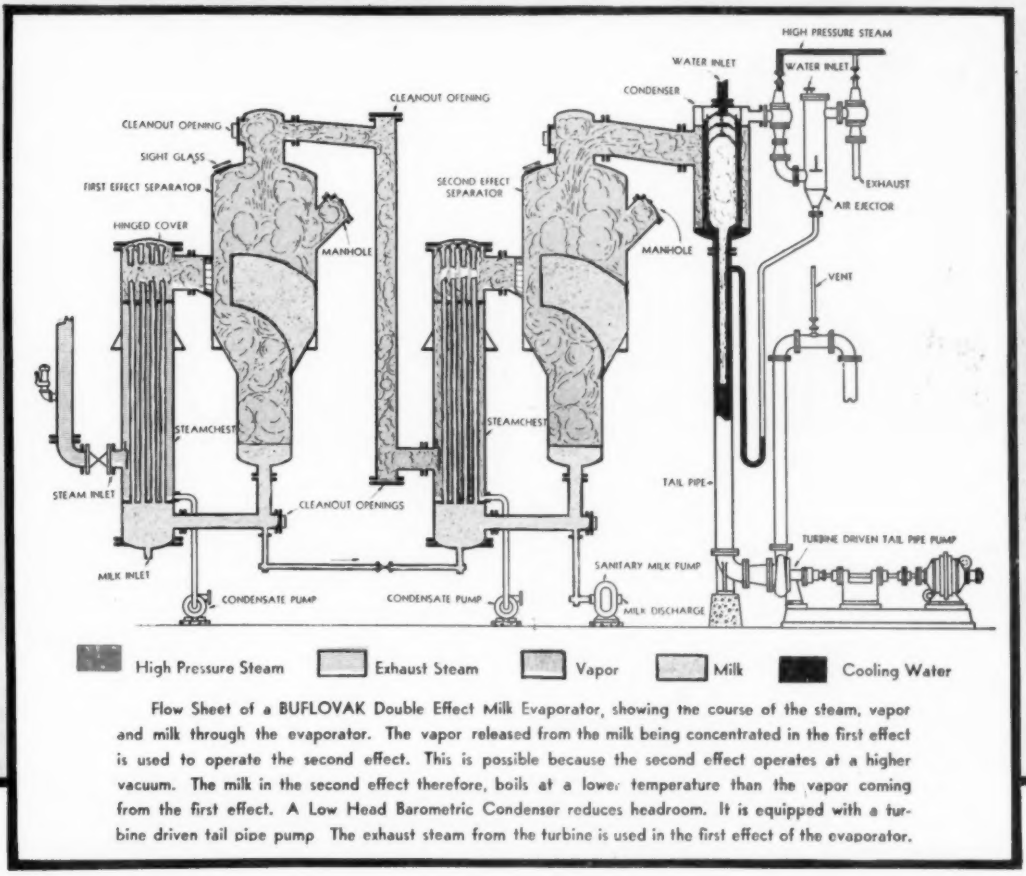
In being put to such a test stainless steel equipment, since its introduction, has come through astonishingly well. The result has been a steadily increasing acknowledgement of stainless steel as the preferred metal by the dairy industry.

Steady Growth in Usage

Back in 1933, by which time stainless steel had already made a name for itself in the dairy industry, approximately 30.2 per cent of all new processing equipment coming in contact with milk was made of stainless steel. By 1941, the last normal year in which stainless was available for dairy equipment, this percentage had risen to 66.7. And in the immediate postwar period, it is estimated by a cross-section of some 30 representative dairy equipment fabricators and jobbers, 82 per cent of all new equipment

HOW BUFLOVAK EVAPORATORS

SAVE 50% in STEAM and COOLING WATER



Flow Sheet of a BUFLOVAK Double Effect Milk Evaporator, showing the course of the steam, vapor and milk through the evaporator. The vapor released from the milk being concentrated in the first effect is used to operate the second effect. This is possible because the second effect operates at a higher vacuum. The milk in the second effect therefore, boils at a lower temperature than the vapor coming from the first effect. A Low Head Barometric Condenser reduces headroom. It is equipped with a turbine driven tail pipe pump The exhaust steam from the turbine is used in the first effect of the evaporator.

BUFLOVAK MILK EVAPORATORS ARE A PROFITABLE INVESTMENT!

To meet the exacting demands of post war markets, your condensed and evaporated milk products must be far above average in uniformity, texture and delicacy of flavor.

With a BUFLOVAK Double Effect MILK EVAPORATOR you can save 50% in steam and cooling water costs . . . and consistently maintain top quality.

These advantages offer milk plant operators worthwhile profits now and in the years ahead.

Write for: Milk Evaporator Bulletin No. 329 — and Milk Dryer Bulletin No. 327

BUFLOVAK EQUIPMENT DIVISION
OF BLAW KNOX COMPANY

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295 Madison Avenue, New York 17 1636 Monadnock Bldg. Chicago 4
2217 Olive Street, St. Louis 3 1706 Broadway Oakland 12, Cal.

coming in contact with milk in dairy plants will be made of stainless steel.

Included in this "equipment coming in contact with milk" are such items as storage tanks, coolers, pasteurizers, truck tanks, vacuum pans, mix vats, bowls and valves of bottle fillers, cheese vats, fittings and tubing, milk contact parts of homogenizers, outside jackets and contact

Fan-type Cabinet Cooler of Stainless Steel

parts of ice cream freezers, filters, weigh cans, sanitary pumps and aging vats. Many other pieces of equipment in dairy processing plants are also made of stainless steel, but the above-mentioned were selected as a representative sample upon which to gather production estimates.

Future Estimates

The following table lists the individual items of equipment on which these fabricators and jobbers gave estimates; and opposite each, composite percentage figures indicating the proportions actually built of stainless in 1933 and 1941, and the proportion estimated to be built of stainless steel in the immediate future.

Equipment	Built of Stainless in 1933 Per cent	Built of Stainless in 1941 Per cent	To be Stainless after the war Per cent
Milk storage tanks	51	88	97
Milk pasteurizers	79	98	99
Weigh cans	28	79	93
Cream pasteurizers	36	97	98
Vacuum pans	0	84	94
Milk filters	4	40	73
Milk coolers	16	32	57
Sanitary pumps	7	41	57
Sanitary fittings	9	28	58
Sanitary pipe	17	51	83
Truck tanks	87	98	98
Ice cream mix vats	80	100	100
Aging vats	No data		100
Cheese vats	16	74	90
Product contact—parts of:			
Bottle fillers	20	75	76
Ice cream freezers	58	65	75
Homogenizers	30	100	100

Further evidence of how the dairy products manufacturers, themselves, feel about stainless steel equipment was uncovered in a survey made in 1939 among some 900 butter and cheese manufacturers.

This survey specified the ten principal items of equipment used in these plants, and asked: if the manufacturers were to buy any of the items at that time, would they prefer stainless steel? The answers ranged from 89 per cent favoring stainless for sanitary tubing, to 98 per cent naming it as their choice for pasteurizers. The grand average of preference for stainless steel in all ten items was 93 per cent. And these views were expressed in one of the last pre-war years, when the acceptance of stainless had not yet reached its height.

This same survey revealed butter and cheese manufacturers expected and were willing to pay more for equipment made of stainless steel. More than 45 per cent of those replying indicated they would expect to pay up to a quarter more for stainless steel; 44 per cent expected to pay up to a half more; 4½ per cent expected to pay up to three-fourths more; and over 6 per cent to pay as much as double. Yet they almost unanimously voiced a preference for stainless steel equipment.

Future Stable and Assured

Now what of the future? What is there in the dairy industry for the fabricator of stainless steel equipment?

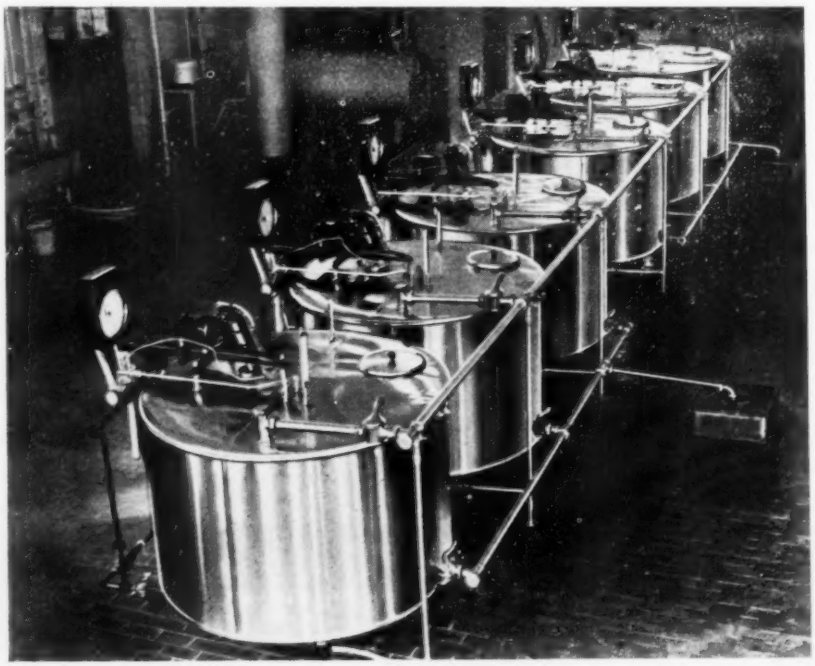
There is, first of all, one of the most stable markets in the United States. The herd of almost 27 million dairy cows in this country produces milk every day in the year, seven days a week, with no time off for strikes or holidays. That milk must be cooled, transported to a receiving or processing plant, and processed every day in the case of fluid bottled milk and most of the other dairy products.

In the case of some dairy products, such as sour cream butter, the cows must still be milked twice a day and the cream suitably held until it is shipped to market for processing. In all cases, it's a regular, endless procedure that either must continue without letup, or the milk must be dumped. As a result, during good times or bad, dairy products manufacturing plants continue to use their equipment daily to near capacity.

Immensity of Industry

Besides being remarkably stable, the dairy industry is also one of America's largest industries. In 1944, there were approximately 27 million cows in the country which produced around 120 billion pounds of milk— approximately 60 billion quarts. The 1942 production of over 56 billion quarts produced a farm income of $2,332,253,000. This compared with a total wheat crop value of $836,570,000; a cotton and cottonseed crop value of $1,458,669,000; a corn crop value of $480,368,000; and a total farm income of just over 16 billion dollars. Cash from milk, therefore, is the biggest single source of income of the American farmer. This cash the farmer receives is about 51 per cent of the total value of the processed dairy products, making the value of all dairy products sold in 1942 around four-and-a-half billion dollars. More currently, it was estimated that the value of all dairy products in 1944 has increased to about five-and-a-half billion dollars.

This dairy industry—the processing end that uses most of the stainless steel equipment and even buys and jobs the



Series of Stainless Steel Batch Pasteurizers

GIRTON Dairy Equipment
GIRTON MFG. CO.

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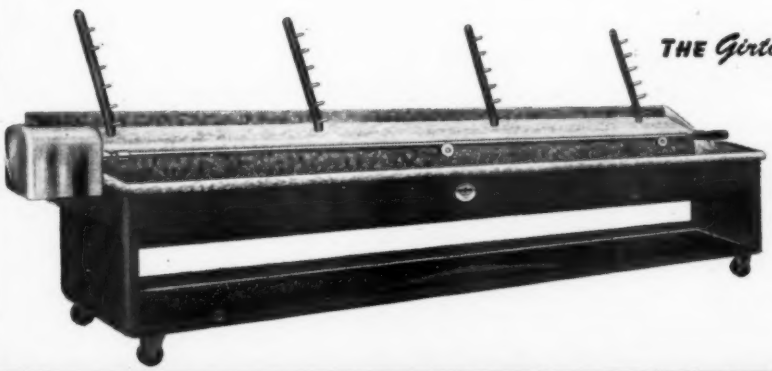
Modern in design, construction and operation . . . Girton Dairy Equipment holds the spotlight in the progressive dairyman's planning. Are you planning new equipment for your plant? Write for information.

THE Girton De Luxe EMPTY CASE WASHER

Above—Low Mount Model, arranged with channels for live conveyor chain. **Right**—High Mount Model, for hand feed, or arranged with channels for live conveyor chain.



THE Girton De Luxe SANITARY PIPE WASHING MACHINE

Adaptable to any method of pipe washing — fresh water, solution or combination.

THE Best Dealers SELL Girton EQUIPMENT

GIRTON MANUFACTURING COMPANY

MILLVILLE, PENNSYLVANIA

Plant-Tested Equipment For The Modern Dairy

lesser quantities of stainless steel equipment used by farmers—is divided roughly into the bottled fluid milk industry, the butter industry, the cheese industry, the evaporated and condensed milk industry, and the ice cream industry.

Breakdown of Utilization

The fluid milk industry utilizes approximately 30.8 per cent of the total milk produced. The chart herewith also reveals that about 35.2 per cent goes into butter. Large amounts of sweetened condensed milk, powdered milk and butter from other branches of the dairy industry are also utilized in the manufacture of ice cream.

Some overlapping of these various branches, of course, exists, for some processing plants of the flexible variety may make two or three, or even more of these dairy products. All plants, however, are equipped with, and require, considerable quantities of stainless steel equipment.

Product Flow and Equipment

Some idea of the various pieces of equipment needed by the dairy industry —most of them preferably of stainless steel—may be gathered by tracing the flow of product through a hypothetical flexible dairy plant, designed to produce all dairy products.

Incoming milk is received in a weigh tank and thence goes to a receiving vat or tank. Incoming cream is weighed in a weigh tank and is diverted directly to the butter department.

Buttermaking Cycle

Milk from the master receiving vat may also go to the butter department through sanitary piping, a filter, heater, separator and pasteurizer. From this point on, both cream separated from whole milk, and cream, sweet or sour, received directly at the intake, follow an identical course through the plant.

Following the pasteurizer the cream goes to a cooler, then to a ripening or tempering vat, and then to the churn. From the churn the butter goes to a print machine, while the by-product, buttermilk, may go to a drier to be made into dried buttermilk, or to a vacuum pan to be made into condensed buttermilk.

For the bottled milk department, milk is drawn from the master receiving vat to a clarifier, pasteurizer, cooler, filter (either cold or hot, before or after pasteurizing) and bottle filler. Cream for bottling comes from the same vat through a heater, separator, pasteurizer, cooler and bottle-filling machine.

Ice Cream Making

Whole milk for ice cream comes from the master receiving vat to a mix vat. Also to this mix vat may come cream, sweetened condensed milk, dry milk or evaporated milk from other departments of the plant. This "mix" then goes to a filter, pasteurizer, homogenizer, cooler, aging vat and freezer.

Whole milk for the condensary department comes from the master receiving vat to a filter, hot well, then to a vacuum pan, homogenizer, standardizing vat, can filling machine, and can sterilizing equipment, after which it is sold as evaporated milk.

Whole milk for the cheese department comes from the master receiving vat to a filter, then to a whole milk vat. The curd then goes to a cheese press and the cheese to a curing room. Part of the by-product, whey, goes from the whole milk vat (cheese vat) to a vacuum pan to be condensed. Another part may go to a sugar extractor to produce sugar of milk.

Whole milk for the concentrated milk department goes via the butter department. From the master receiving vat the whole milk passes to heater, filter, separator, from which the cream may go to a churn for making into butter, or to a ripening vat, and thence to a bottler to be sold as commercial sour cream.

Utilization of Skimmilk

Since a large part of the milk is skim, after going through the separator, a flexible plant disposes of this skim by making it into many different products. The skim milk may go from the separator to a skim milk vat, where part might be diverted to a culture vat and bottler to be sold as cultured buttermilk. Another part may go to a cottage cheese vat to produce cottage cheese. These latter two operations are typical of fluid milk bottling plants.

Still another part may go into a hot well and vacuum pan, as is the case in typical creameries or flexible manufactured dairy products plants. From here the condensed skim milk may go through a pump to a drier to produce non-fat dry milk solids, as is the case in creameries set up to produce powdered milk. Another part of the condensed skim milk may have sugar added to it, go through a homogenizer and into barrels to be sold as sweetened condensed skim milk for ice cream manufacture.

Typical creameries, here referred to as the butter department, also produce considerable quantities of powdered whole milk, particularly since the war, and they may also produce powdered skim milk directly from the skim milk without first condensing it. Still another part of the skim milk in the original skim milk vat may go to a curdling vat, sieve, press, mill and drier to become casein.

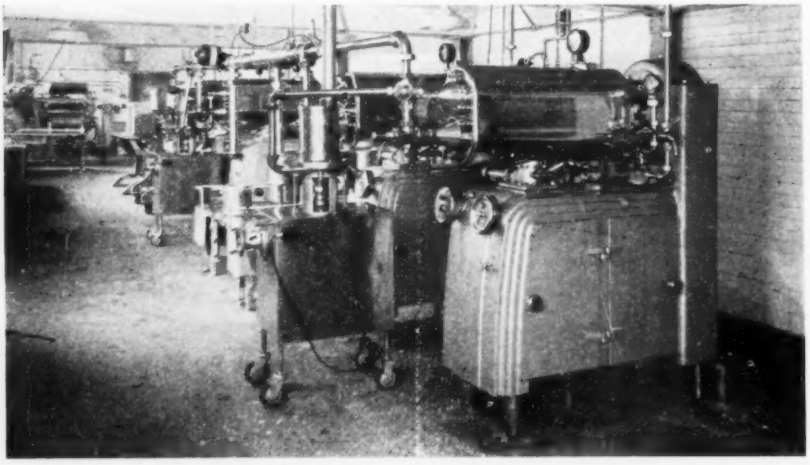
Long Service Equipment

In considering the future market for equipment in the dairy industry, an important factor to recognize is the age of present equipment and the question of how soon it will have to be replaced by new machinery. With stainless steel equipment, of course, age has little or no effect on operating condition, since stainless remains "as good as new" indefinitely. It might become outmoded, however, so that equipment of more modern design would replace it to advantage; or again, might require replacement in the interest of enlarged capacity.

A survey made in early 1944 by a prominent publisher of dairy industry papers, reveals that 58.2 per cent of principal items of dairy equipment was then more than 5 years old, and that 27.9 per cent was more than 10 years of age.

Future Equipment Demands

On the basis of these figures, it is evident that considerable new equipment—stainless steel equipment—is going to be



Stainless Steel Ice Cream Freezers in Telling-Belle Vernon Plant

AMESTEAM Generator

The AMESTEAM Generator is a wonderful power plant. In one self-contained unit, it provides all the features that any small or medium-sized plant may require!

It takes a minimum of manpower at all times, because it's easy to install, easy to operate, easy to repair. And it delivers a maximum of power because of the excellence of its design and manufacture. It gives steam *rapidly* . . . and with complete cleanliness . . . and requires no expensive foundation or stack.

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BOX J1 OSWEGO, NEW YORK

needed by the dairy industry.

Immediate future needs can be estimated to some extent by past requirements of the dairy industry. During the three-year period, 1939 through 1941, average yearly requirements of the dairy industry for typical items were: approximately 500 storage tanks for all types of milk products; 600 or more weigh cans; between 1,500 and 2,000 milk coolers, mostly of the surface cooler type; over 600 cheese vats; between 2,500 and 3,500 filters; close to 500 homogenizers, including high pressure pumps; 350 or more ice cream freezers; 40 or more vacuum pans; and between 3,000 and 4,000 sanitary pumps. These purchases, it must of course be remembered in making plans for future production, were made during a period of growing restrictions on manufacture; and production of dairy equipment in the years after the war will of course be much greater.

Qualities Ideal for Dairy Plant

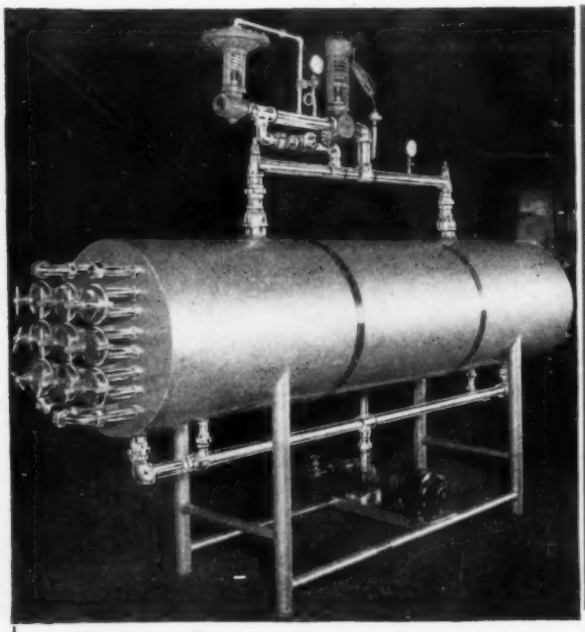
How does stainless steel fit into the picture as the metal from which this future dairy equipment is to be made?

As the previously mentioned surveys among dairy products manufacturers indicate, stainless steel has sold itself to the industry to the extent that it dominates the field for practically all equipment or parts of equipment coming in contact with milk or other dairy products. It has proved itself practically indestructible under severe dairy plant operating conditions. It is non-porous and therefore easily cleaned to protect milk against contamination. Any higher first cost is more than offset by low cleaning and maintenance costs, by long life and uninterrupted service, and by freedom from product spoilage.

Certainly for the more important and larger pieces of plant equipment, and for most of the other items as well, a leading dairy equipment manufacturer has concluded that stainless steel will be without competition in this field for many years, because of its proved qualities compared with the weaknesses or unknown factors of other materials previously used or available.

Another fabricator, who has been manufacturing dairy equipment for many years, sums up the problem of what metal to use for dairy equipment when he recalls the various difficulties encountered with other metals in the past: exposure of copper to milk due to wearing of a tin coating, denting of soft metal through accidentally dropping heavy objects into the equipment, development of off-flavors due to contact of milk with the wrong kind of metal, and many others. Now he uses heavy gauge stainless, which finishes up beautifully and his customers demand it. This, he admits, costs more money, but spread the cost over the extra years of life secured from stainless equipment, take into account the low cost of maintaining quality, and it is clearly cheaper in the long run.

These observations, and countless others of a similar nature, indicate that new equipment installed by the dairy industry in the years to come will be overwhelmingly stainless steel.



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are used regularly on high-temperature installations

For over a quarter of a century it has been the constant effort of the entire TRI-CLOVER organization to design and produce progressively better Sanitary Fittings, Sanitary Tubing, Sanitary Valves and Sanitary Pumps—products of outstanding precision, durability and efficiency, promoting the highest sanitary standards. Milk distributing and processing plants all over America prefer the smooth, economical, trouble-free operation of the TRI-CLOVER Line.

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2. Fabricated Stainless Steel Sanitary Fittings
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ICE CREAM CONFERENCE

State College, Pa.—The usual ice cream conference held at the conclusion of the two-weeks' ice cream short course will be held this year on February 22 after a lapse of two years because of the war-time travel restrictions, according to a late announcement from Prof. C. D. Dahle, head of the dairy manufacturing department. A program of post-war subjects will be handled by well known speakers of the industry and will be announced later.

The annual banquet of the Serum Solids Club will be held at the State College Hotel on the evening of February 22. The banquet speakers will be announced later, also.

XUM

Vapor Film

The DAMROW name for better pasteurizing

Many, many years ago, when Damrow pioneered this revolutionary new method of heating, a name was coined to describe it. "VAPOR FILM" has since been proved far superior to any other method of pasteurizing — by competitive tests involving hundreds of DAMROW Vapor Film Pasteurizers in dairies everywhere.

Remember DAMROW "VAPOR FILM" when you want these typical features to step up production — and profits

★ FASTER HEATING — Immediate heat, with no water in tank to be heated first.

★ HEATS WITH STEAM VAPOR FROM BOTTOM UP — The result of Damrow patented construction. No steam strikes the milk heating surface directly.

★ NO HEATING JACKET PRESSURE

★ NO HOT SPOTS — Steam never contacts the inner milk tank. Only condensed vapor — DAMROW "VAPOR FILM".

★ MILK HEATS GRADUALLY

★ NO WATER TO DRAIN — And no waterstone can collect to require dismantling and servicing.

★ PERFECT AGITATION — Large 3-blade propeller, set off-center.

Check this Exceptional Record of DAMROW "VAPOR FILM" Efficiency . . .

This recording chart covers the operation of a DAMROW "VAPOR FILM" 200 gallon MV pasteurizer, containing 220 gallons of milk. Heated from 51° to 144° in 19 minutes, held for 40 minutes, dropped 10° by spray ring in 3 - 4 minutes and held for 1 hour and 40 minutes.

These are only a few of many original features which make the DAMROW "VAPOR FILM" your most profitable choice for modern pasteurizing efficiency. Write for complete details and prices — or see your Damrow Jobber.

DAMROW
COMPLETE EQUIPMENT FOR THE DAIRY INDUSTRY

DAMROW BROTHERS COMPANY
204 Western Avenue, Fond du Lac, Wisconsin

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Explain Order Changes

Conferences Are Concluded by Dept. of Agriculture and Markets in Cooperation with Dairy Authorities

Albany, N. Y.—Reconversion problems facing dairy farmers who supply milk to the New York metropolitan market were subjected to a detailed airing at a recent series of six state-wide conferences sponsored jointly by the New York State Department of Agriculture and Markets and the United States Department of Agriculture.

The conferences at Malone, Albany, Syracuse, Elmira, Port Jervis and New York City, were conducted as a preliminary to formal hearings on proposed amendments to the State-Federal milk marketing orders for the New York Metropolitan area. It is expected the formal hearings will be opened in the latter half of January.

Milk producers at all of the conferences declared themselves overwhelmingly in favor of proposals by the Metropolitan Cooperative Milk Producers' Bargaining Agency, Eastern Milk Producers' Cooperative Association and Crowley's Milk Producers' Cooperative Association to amend the orders by stepping up the price paid to producers for fluid milk when federal subsidies are removed.

Consumer Groups Opposed

Organized consumer groups in New York City, however, opposed the proposed amendment. They contended that an increase of two to three cents a quart in the retail price of milk would result and that lowered consumption would follow. The consumer groups held that milk used in the manufacturing classifications could absorb the increase to compensate for withdrawal of subsidies. Producers argue that this is impossible in a competitive market.

Also explained at each of the six conferences were other proposed amendments dealing with surplus milk. The leading proposal in this connection provides for an auction system enabling fluid milk dealers who lack facilities for manufacturing to offer their surplus at auction through the market administrator's office.

Kenneth F. Fee, director of the Division of Milk Control of the New York State Department of Agriculture and Markets, represented Commissioner C. Chester Du Mond and presided at all of the preliminary hearings. Sitting with him were Paul Miller and George Ware, economists from the United States Department of Agriculture, and Edward Nuclo of the New York Market Administrator's office.

Additional proposals for amending the milk marketing orders have been submitted by the Milk Dealers' Association of Metropolitan New York, the Mutual Cooperative of Independent Producers, the Guernsey Breeders' Association, the cheese industry and the ice cream makers.

RETURNS TO HEIL COMPANY

Jack Davies Appointed District Sales Manager in Southeast

Back into "civies" after two years as a Captain in Army Ordinance, Jack Davies has been appointed district manager for sales of all Heil products in the Southeastern states of Tennessee, Alabama, Georgia, the Carolinas, and Florida.

Jack Davies

Ray Long, who has been representing the company in this territory, will continue to work out of the Raleigh office but will concentrate on road machinery sales.

Davies started in the service department of The Heil Company over 20 years ago, later served as sales representative successively in Wisconsin, Buffalo, Washington, D. C., and Atlanta. His intimate experience with Heil products, from manufacture to servicing will be of much value to Heil distributors in the southeastern states.

NEW CITRUS JUICE PLANT

Fresh Tree Fruit Flavor to Be Maintained by Process and Facilities

An interesting new citrus juice freezing plant is now being built by Hart's Citrus Products Company at Bea, California, with headquarters last year and so far this year at La Habra, California.

This plant, located in the center of Orange and Los Angeles counties' vast citrus empire, is revolutionary in many of its methods of extraction, handling, freezing and packing, designed and test-proven through the company's 1945 operations, to produce a juice in the can, semi-fresh and frozen, strikingly similar to that from fresh fruit.

The plant will be the third of a group of citrus processing plants to be owned and operated by a group of Californians, long in the citrus growing and processing fields. The parent company is in the candied citrus peel and fruit processing business; the second company is said to be the largest peel briner in the United States; the third producing company, the juice plant, will now be able to coordinate its activities with the other two, supplying them with their quality peel needs. The growers will ship their own orchard fruit to this plant, insuring an unusually high-quality fruit and juice.

A unique set-up of the plant is that it will can the extra fancy grade juice, will package a semi-fresh juice, and will freeze the pure, fresh juice, for both institutional and retail trade. Other items to be handled include concentrated juices, canned and frozen, and other orange products. Containers for the frozen juice will combine greater adaptability for liquids, extra visibility, airtightness and leak-proof.

The real tree-fresh flavor of the juice is the major result of the ultra-modern plant, according to Edwin Hart, manager, and the juice is expected to compete with quality canned juices in the markets where flavor, non-settling, color quality and vitamin-richness are the deciding factors.

FARM SOCIETY TO MEET

N. Y. State Agricultural Society Schedules Annual Meeting at Albany

Albany, N. Y.—The New York State Agricultural Society, oldest farm organization in the United States, will meet in annual session for the 114th time at the Governor Alfred E. Smith State Office Building, Albany, January 23.

Announcing the date of the annual meeting, Secretary Perley M. Eastman, who is associated with the New York State Department of Agriculture and Markets, said the theme of the gathering of agriculturists will be: "Agriculture,—What of the Future?"

Presiding at the morning session, Fred H. Sexauer of Auburn will introduce Dr. H. F. DeGraff of the State College of Agriculture who is to discuss "Agriculture and Industry before and after 1800," and Dr. F. F. Hill, also of the College of Agriculture, whose topic will be: "We look ahead to post-war years." Dean W. I. Myers of the College of Agriculture and Dr. F. A. Pearson, professor of prices and statistics, will participate in the morning forum.

Under the direction of H. E. Babcock of Ithaca, the afternoon program is scheduled to present speakers on "New York's stake in an ever-normal refrigerator." The winner of the State Grange speaking contest will be a guest of the Society.

Climaxing the day's events will be the annual farm dinner at the DeWitt Clinton Hotel with Governor Thomas E. Dewey as the speaker. Governor Dewey also will present citations to the "century farmers" selected for the 1946 awards.

Present officers of the Society are Harry Bull of Campbell Hall, president; Mr. Eastman, secretary, and Webster J. Birdsall of the Department of Agriculture and Markets, treasurer.

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REGISTERED TRADE MARK OF
CENTRIFUGAL HEADQUARTERS

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SEPARATORS AND CLARIFIERS FOR ANOTHER GREAT INDUSTRY!

Dairy products processing is one of the most vital of American Industries.

Sharples Cream Separators and Milk Clarifiers are being built with full knowledge that they must meet the exacting requirements of these industries . . . in efficiency, in economy of operation, and durability. They must compare favorably with the best of any other type of industrial equipment . . . in addition, they must be ultra-sanitary and pleasingly streamlined.

As a result of hundreds of suggestions received from practical dairy people, dairy engineers and scientists—plus Sharples' own 30 years of experience in centrifugal engineering—we are certain that when you see and use these brilliant new Sharples machines you will agree that they meet your own specifications for the ideal separator or clarifier.

Deliveries will be made in the Spring of 1946.

Have you requested your copy of the new informative Bulletin . . . available soon?

DAIRY EQUIPMENT DIVISION

THE SHARPLES CORPORATION

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How to Improve
Coal Utilization
and
Boiler Efficiency

(By THEODORE O. PHILLIPS—Bituminous Coal Institute)

IN ORDER to eliminate waste and thus effect economy in a conventional power plant, we first assure ourselves of easily obtainable, economical and dependable sources of coal. This is the first problem of the plant owner or operator, because we will assume that the plant is not situated at the mouth of the mine.

Having a dependable source of coal, the next step is selection of equipment to burn it with best results. The process was often reversed, selection of coal-burning equipment being made before a choice of coal. Quite often results were so disastrous that changes were made to costlier fuels or in equipment or both. This could have been avoided if the plant operator had employed the services of a fuel or consulting engineer. Coal operators and fuel suppliers maintain staffs of engineers whose services are offered free to consumers.

Selection of Equipment

Properly selected coal-burning equipment is only one of the methods used to eliminate waste. Its aim is to utilize the maximum amount of fuel so that less coal is burned. Mechanical burning devices aim at complete combustion, reducing the amount of unburned coal in ash and thwarting the escape of combustible gases to the stack. These objectives are reached by steady feeding of coal to the furnace at a rate to conform to the demand for steam.

Smaller portions of fuel are more easily digested in the furnace, inducing more complete combustion of the gaseous products. This is unlike the process in a hand-fired plant when the deposit of a comparatively large charge of fresh coal is placed on the fire with the resultant rush of distilled gases into the furnace. Some of this gas is burned in the furnace but much of it will not have time for complete burning and will indicate its loss to the atmosphere in the presence of clouds of smoke. This loss is preventable by the steady feeding of small charges of coal into the furnace, permitting time for complete burning of the gases issuing from the coal.

Coal may be fed uniformly into the furnace at any desired rate by several methods. Stokers of either the underfeed, chaingrate, pulverized coal burners, or spreader types can be used.

Combustible Gases

Whatever the method, the ultimate aim in burning a solid fuel is to produce a gas flame. The gasification of solid fuel and the complete combustion of the gas combine to achieve highest technical efficiency.

To reduce the temperature of the gases escaping from the boiler, the boiler heating surfaces, inside and out, must be kept clean of soot and scale. In this way more heat will be transferred through the metal to the water in the boiler. Furthermore, draft must be regulated and burning rate of coal kept down to reduce the velocity of the hot gases through the boiler. Proper carburetion of the fuel, that is, complete mixing of the required amount of air with the fuel, is an important step in the right direction. Too little air will prevent complete combustion of the fuel, while too much air robs the furnace of heat.

Prevention of Leaks

The following illustration of this point is used because as a rule firemen find it difficult to correct something which they can't see. We are all aware of the effect of mixing boiling water with ice water. Although the difference in temperature is a mere 180 deg. F., boiling stops and the temperature of the cold water rises at the expense of the boiling water. Picture, then, if you can, the inrush of air at 80 deg. F. into a furnace at 2,000 deg. F.! The fireman can do this unwittingly by permitting air to enter through burned-out holes in the fire, or by opening the firing door to check the draft, or by carrying too thin a fuel bed. The large volumes of air thus admitted are heated by the fuel bed and the hot gas passes up the stack. The excess air has done no work of any kind but has simply robbed the furnace of heat which rightfully should pass into the boiler.

The loss due to incomplete burning of the coal is usually due to insufficient air or improper mixing of the air with the fuel. If a highly volatile coal is used in undersized furnaces, over-fire air jets are recommended for producing turbulence in the furnace to insure proper mixing of air with the hot gases from the fire. As a rule, the bugaboo is too much air, not insufficient air. If the loss due to unconsumed carbon is relatively high the installation of jets will be found to be inexpensive and effective.

Moisture in Coal

Moisture in coal is composed of inherent and surface moisture. Inherent moisture of deep mine coals is 1 to 3 per cent and at these figures the loss due to moisture will be insignificant. It is only when snow, ice, and rain add moisture to coal, sometimes as high as 10 per cent, that precautions should be taken to keep the coal dry. There is no heating value in moisture. Some bituminous coals, however, hold little surface moisture and in fact tend to repel moisture from its surfaces. It is generally true, however, that stationary firemen show great interest in more efficient methods of operation, provided they are given simple yardsticks for determining them.

Too much stress cannot be placed on the proper coordination of coal-burning equipment with the coal or coals which it will burn. The equipment should be amply sized to permit carrying heavy boiler loads with moderate combustion rates. These burning rates must be such as to reduce to a minimum formation of clinker. Even coals with a comparatively low ash melting temperature can be burned without difficulty if the fires are not forced too much. It should be understandable, even to the uninitiated, that the largest reserves of coal are the medium and lower grades. They are also lower priced than the high grade coals.

The commercial efficiency may or may not be higher with the lower grade coal—dependent on whether there is an appreciable price advantage and if proper methods are employed to extract the greatest amount of heat from the burning of these coals.

Fuel Specifications

Manufacturers can today supply combustion equipment which will burn any type of bituminous coal with high efficiency and satisfactory performance. However, in order to do this successfully they must be supplied initially with a carefully drawn fuel specification for design purposes showing the range of coals involved. The fuel specification supplied by the consumer or his consulting engineer should be based on a thorough investigation of the coal sources economically available to the plant in question. All contract proposals and perform-

the National Dairy Council is

ready!

One hundred twenty billion pounds of milk won't sell itself! THE PLANNED PROGRAM of the National Dairy Council is ready to help move the vast flood of milk which lies ahead. This is a tremendous job! Every member of the dairy industry should be *planning* and *acting now* to do his part to build a market for this tremendous quantity of milk.

National Dairy Council is ready with a strong, efficient program to increase the consumption of dairy foods . . . a program that has proved its effectiveness for 27 years in the QUICK, DIRECT WAY through influencing LEADERS WHO REACH MILLIONS. National Dairy Council and its network of affiliated units, through direct, professional contacts enlists the *participation of*

DOCTORS . . . DENTISTS . . . NURSES . . . DIETITIANS . . . HOME ECONOMISTS . . . TEACHERS . . . CIVIC LEADERS, ETC.

. . . the leaders who strongly influence the food habits of the nation.

Millions of Americans positively NEED MORE BUTTER, MORE CHEESE, MORE ICE CREAM! The scientific and educational leaders reached by National Dairy Council have the power to influence *an increased consumption of dairy foods* for the health and strength of America.

Through National Dairy Council you can help to make possible increased work with these leaders who can do so much for YOU and YOUR INDUSTRY. This is a job that the dairy industry cannot do for itself.

you owe it to yourself . . .
and to your industry . . . to investigate . . .

NATIONAL DAIRY COUNCIL

• Believing sincerely in the National Dairy Council and the vital importance of its work, this space has been contributed for the good of the dairy industry by

AMERICAN MILK REVIEW

This Concerns You! WRITE NOW!

Find out *how* the National Dairy Council works for the dairy industry to increase consumption of all dairy foods. Send for full information now . . . today. Write:

NATIONAL DAIRY COUNCIL
111 N. CANAL STREET, CHICAGO 6, ILL.

ance guarantees should be related to this coal specification.

The life of a boiler plant is approximately 25 years and its design should provide sufficient flexibility to enable it to burn the coals which will be economically available to it during this long period.

Due to the processes of nature in the ages when the coal was formed, some products turned out superior to others. Some had more heat and less ash. Some released their heat more easily than others. But deficiencies of nature are often overcome. According to Irwin R. Hoffman, a noted fuel authority of New York, the deficiencies of coals with low heat values and high ash are being overcome through cleaning and preparation.

DAIRY SHORT COURSES

Amherst, Mass.—Professor J. H. Frandsen of the Department of Dairy Industry of the Masachusetts State College announces that the department will offer four special and practical short courses of interest to dairy people. These courses are especially intended to satisfy the needs of those interested in certain phases of the work and who do not feel that they can be away for an extended period.

The first course will be in *Milk and Cream Testing; How to Take Samples; Analyzing and Inspecting of Milk Products,* and problems pertaining thereto. This course will run from January 21-26, 1946.

The second course is planned for those interested in *Milk Plant Operation and the Manufacture of Milk Products from the Surplus Milk.* This course will run from January 28-February 2, 1946.

The third course is a *Review of the History and Development of the Ice Cream Industry, together with the Application of Desirable Practices in the Ice Cream Field.* This course is especially planned for those with limited experience in ice cream work, and will run from February 4-February 9, 1946.

The fourth course is a *Week of Intensive Training for the Experienced Ice Cream Maker.* This course is especially planned for those who have had some experience in ice cream making or who have taken the third course. It will run from February 11-16, 1946.

The two ice cream courses are so well coordinated that many plan to take both courses.

These courses are arranged so that even the busy man should be able to get away for the length of time required.

Full information regarding these short courses may be secured from the Department of Dairy Industry, or from the Director of Short Courses, M. S. C., Amherst, Mass.

Diesel Engine Usage

Reliable Source of Electric Power for Emergency or Standby Purposes — Different Sizes Available

Prior to the war, the generator set, made up of a generator driven either by a gasoline or Diesel engine, and designed to provide light and power during a power failure, was virtually in the same state of development as was the Model T Ford in its time. Today, with the gigantic impetus provided by the war, the generator set has emerged as a modern, fully dependable piece of electrical equipment.

Eight months before hostilities came to an end, the International Diesel Electric Company conducted a thorough-going, scientific investigation into the adaptability to civilian use of the generator sets then being built for the U. S. Army and Navy. The results of this research disclosed an enormous, country-wide need for emergency standby units. And this, despite the fact that knowledge of the availability of equipment which would automatically take over the electric load in the event of main source power failure, was not universal. In other words, the market for the emergency standby unit was tremendous—and became even greater the more people became familiar with its existence and its many applications.

Following is a brief summary of the important facts about generating sets, so that a potential user may get an idea of the unique opportunity in this field.

These generating sets may be used in any of the following applications. *First:* to provide a reliable source of electric power for emergency or standby purposes. *Secondly:* for intermittent, or frequently-used service. *Thirdly:* for continuous service in rare cases when public utility electric power is not available.

The electric utility companies have grown to their present size primarily because they have provided a needed and useful service to the public. There are some exceptions to this rule, but the general effect is that electric service is generally and increasingly available to those who require it.

However, there are many instances in which continuous and uninterrupted service cannot be maintained. These occur through no fault of the utility company, but because of nature's hazards, such as thunderstorms, sleet storms, hurricanes, fires, or other similar catastrophes. On such occasions, emergency electric power becomes an absolute necessity. Imagine what would happen in the operating room of a hospital if there were a power failure and no emergency source of power standing by. Yet too many hospitals today have wholly inadequate and in many cases obsolete sources of standby power. This only one example; there are forty to fifty specific classes of users—and with such equipment provided at a reasonable price, the market is limited only by the dealer's ability to sell.

To provide dealers with the equipment to satisfy this unlimited market and great need, this company is now in production on a line of generating units designed to meet all types of emergency needs, ranging from the small unit for the household, to the unit powerful enough to operate a large establishment.

TOP JERSEY BREEDERS NAMED

Paul Moody, Delaware County Dairyman, First in 4-H Contest

Ithaca, N. Y.—From a field of 16 competitors Paul Moody, 18, of Hamden, Delaware county, was selected as New York's first champion 4-H Jersey club member. With the honor went an invitation to attend the annual meeting and banquet of the New York State Jersey Breeders' Association in Syracuse, December 1. The winner received a plaque as the state award, while all competitors received certificates.

Paul started 4-H work in 1936 by selecting a foundation calf. Today he owns a herd of 14 registered Jersey cattle, seven of which trace to his first two 4-H heifers. He keeps records and reports that his first heifer made 7970 pounds of milk and 431.2 pounds of fat as a 6-year-old cow. His milking herd at present consists of six cows.

Acording to Prof. H. A. Willman, 4-H livestock specialist at Cornell University, the youthful dairyman has made an outstanding record through the years, having won distinction in exhibiting, showmanship, record keeping, leadership, judging, and demonstrations. His principal demonstration dealt with the construction of a milk house and use of a good cooling system.

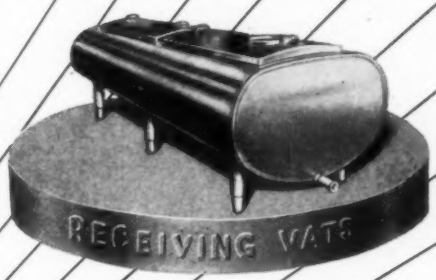
Among other top ranking young Jersey breeders who entered the 1945 contest were Francis Jennings, East Durham, Greene county; Dean Hughston, Stanley, Ontario county; Donald Gladstone, Little Britain, Orange county; Robert Savage, Dexter, Jefferson county; and Edward Luchsinger, Syracuse, Onondaga county.

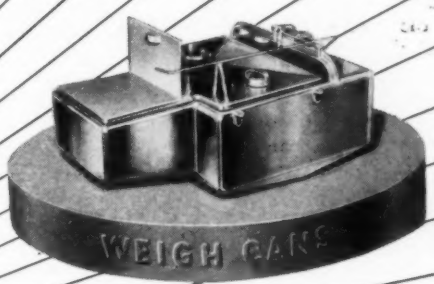
T. & T. DIVISION OF MERCHANTS

Effective December 1, 1945 Terminals and Transportation Corporation at Buffalo was consolidated into and operated as a division of Merchants Refrigerating Company, New York City.

In the future all communications and all shipments consigned to Buffalo should be addressed as follows: Merchants Refrigerating Company, T. & T. Division, 975 Fuhrmann Boulevard, Buffalo 5, New York. Telephone TRiangle 5-200.

Sani-Certified
STAINLESS STEEL
DAIRY EQUIPMENT





ICE CREAM MIX TANKS · PASTEURIZERS
SPECIAL EQUIPMENT · CREAM COOLERS · HOT WELLS
GENERAL PURPOSE TANKS · COOLING VATS
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WRITE FOR BULLETIN 251A

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Since 1908

STAINLESS & STEEL
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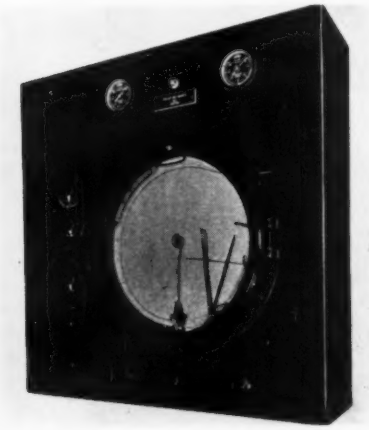
Using Our Separator

Items of Interest Skimmed From Here and There

CycleLog Controller

FOR BATCH-TYPE processes and other operations where rate of temperature increase or decrease must be controlled, as well as the actual processing temperature and duration, The Foxboro Company, Foxboro, Mass., has developed the CycleLog Controller, now available as a standard item in the company's line of instruments for measurement and control.



The name CycleLog was adopted as expressing the instrument's unique function, in controlling and recording all the steps of a complete process cycle. No time-cans or supplementary instruments are employed. CycleLog control is completely automatic, according to whatever schedule is predetermined by adjustments of four setting knobs on the instrument panel.

The CycleLog Controller will hold the batch at exactly the correct temperature for the correct period of time, and then shut off the heat supply, and signal the operator that the cycle has been completed. By reference to the instrument chart and its notations, any cycle can be exactly duplicated as desired, in any similar plant and regardless of season.

Tite-Wite Enamel

THE O. HOMMEL COMPANY of Pittsburgh has announced the development of a new porcelain enamel, "Tite-Wite," which according to Ernest Hommel, president, will make possible the use of porcelain enamel on many additional products.

Tite-Wite is described as a super opaque white cover coat in both regular and acid resisting procelain enamels that can be applied nearly as thin as the best organic paint finishes. Tests show reflectance readings of 75 to 80 per cent and over when applications of 15 to 20 grams per square foot are applied.

Mr. Hommel feels that Tite-Wite is an outstanding development in the enameling industry. Since 1891 the O. Hommel Company has pioneered many improvements in material and methods for the Ceramic and Porcelain Enameling Industries.

Vapor Cleaning Unit

TO MEET the exacting demands for faster, better cleaning at lower cost, Oakite Products, Inc., has developed a new, quality-engineered, multiple-duty steam cleaning unit known as the Oakite-Vapor Cleaning Unit.

This unique unit is a self-contained, down-draft flame, oil-fired, enclosed coil-type steam generator that delivers hot vaporized cleaning solutions under selective pressures up to 200 lbs. for the speedier, easier removal of grease, grit, grime, paint and other deposits from surfaces. A wide range of fuel oils such as No. 1, No. 2 or No. 3 fuel oil, kerosene or gasoline, may be used to operate the unit. Due to its flexibility of steam pressures, the unit may be used on many different types of light and heavy-duty cleaning.

Extremely rugged in construction, only the highest quality materials are used in the manufacture of the Oakite-Vapor Cleaning Unit. Built for longer, continuous, trouble-free service the unit has tremendous reserve power and operates without vibration. Many new exclusive features are incorporated that provide for simplicity and ease of operation and maintenance, rapid steam generation, unusual solution tank capacity, effective operation of two steam guns simultaneously, wide flexibility in its application to various cleaning operations, safety against fire (A.S.M.E. safety code standards are fully met) and other advantages.

Free descriptive folder on the new Oakite-Vapor Cleaning Unit is available upon request to Oakite Products, Inc., 57 Thames Street, New York 6, N. Y.

Fire Extinguisher

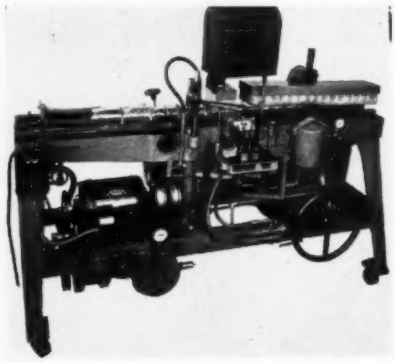
A NEW CARBON DIOXIDE hand fire extinguisher with unique design and quick operating features developed during the war is announced by The B. F. Goodrich Company, Akron, Ohio.

Made to meet the full approval of fire underwriters, the container holds four pounds of carbon dioxide and comes with a carrying handle and control button designed for fast operation. It can be easily carried in one hand, with the thumb of the carrying hand operating the push button. A horn swivel quickly raises or lowers as needed, remaining in lower position when attached to the wall rack furnished with each extinguisher, together with a quick release chain.

Painted vivid orange and black for high visibility, the extinguisher may be recharged at regular refill service establishments.

Labeling Machine

OF INTEREST to the packaging industry is the newly developed Vac Spray Labeler manufactured by the Vac Spray Machine Company of Minneapolis, Minnesota. This machine will apply labels from the size of a postage stamp up to those five inches in diameter on containers from one-quarter ounce to one gallon size at a rate of from 1,200 to 3,000 per hour.



No stoppage of a production line is necessary to make the change-over from one size or shape of label to another or from one size container to another. The change-over can be made in about one minute simply by turning a knob. The labels may be either gum-backed or of the ungummed variety. They may be foil, varnished, lithographed, or plain.

The speed can be varied over a range from 1,200 to 3,000 containers per hour depending upon the size of the container and the ability of the operator. The change-over from one speed to another can likewise be made in less than one minute.

This labeler is portable in that it is on casters, and can be moved from one part of a plant to another, wherever an electric wall plug is available for power supply.

Refrigeration

ARCTIC ENGINEERING CORP., Chicago, Ill., recently organized, has been appointed exclusive distributor for the Howe Ice Machine Co., in Illinois, Indiana, Wisconsin and Michigan.

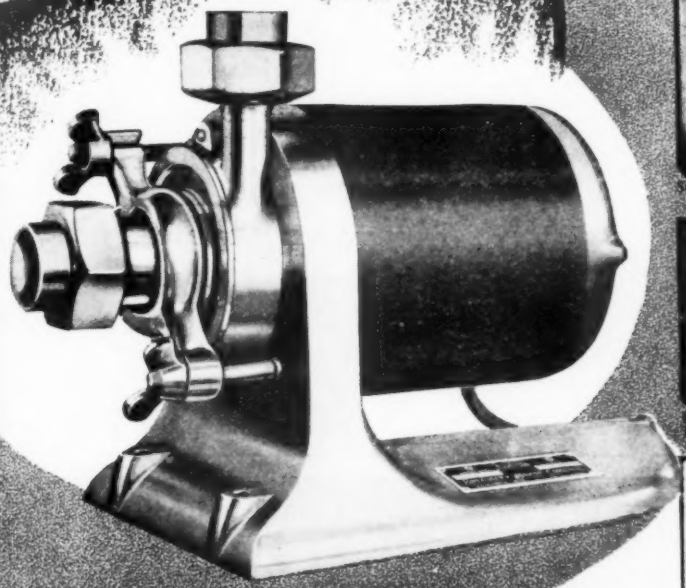
The new company will also handle the well-known line of Gebhardt circulator units for the food industry, and conduct a complete contracting and engineering service in the refrigeration and air conditioning field.

A DAIRY Improvement PROGRAM

INCREASES PEAK CAPACITIES

Include this improved NOFOME Pump in your Plant Improvement Plan. Note these outstanding features . . . Compact, simple design . . . removable inboard and outboard heads for easy cleaning . . . single piece impeller to prevent foaming or churning . . . no internal threads . . . rotary seal . . . head gasket that cannot blow out or leak . . . no misalignment, with motor assembled as integral part of pump . . . no pump bearings.

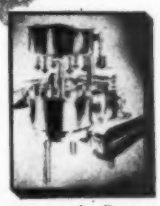
You can't go wrong by installing sturdy, easy-to-clean, profit-producing NOFOME centrifugal pumps in your lines. For detailed information, write to Specialty Brass Company, Dept. AMR, Kenosha, Wis.



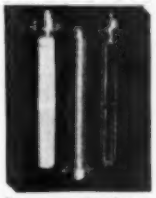
A DAIRY IMPROVEMENT PROGRAM

1. INCREASES PEAK CAPACITIES
2. Lowers Operating Costs
3. Improves Product Quality
4. Prevents Production Bottlenecks
5. Increases Profits
6. Saves Vital Time
7. Protects Product Flavor
8. Increases Cream Volume
9. Reduces Milk Waste
10. Steps Up Operating Efficiency
11. Insures Space Economy
12. Reduces Maintenance Costs

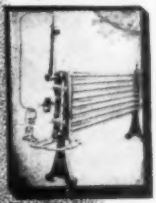
SBC engineers will gladly advise with you regarding your plans for plant improvement.



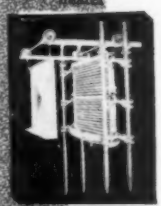
Automatic Rotary Filler and Capper



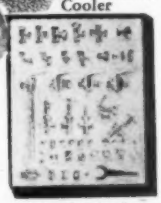
Economy Sanitary Pipe Line Filter



Super Noburn Preheater



Interlocking Lip Tubing 1" Surface Cooler



I. A. M. D. Sanitary Fittings

IMPROVED EQUIPMENT SBC FOR BETTER DAIRY PRODUCTS

QUALITY DAIRY EQUIPMENT IS OUR SPECIALTY

141

SPECIALTY BRASS COMPANY KENOSHA, WISCONSIN

Known All Over the World For Cost-Reducing Equipment

EMPLOYEES ENTERTAINED

Schwartz Mfg. Co. Treats Workers and Presents Bonus Checks

Nearly 125 employees of the Schwartz Manufacturing Company, Two Rivers, Wisconsin, were treated to a festive turkey dinner and program of entertainment December 17, marking the 25th anniversary of the organization. The program was climaxed by the annual presentation of five per cent bonus checks on yearly earnings.

Simon Schwartz

The event, in a festive Yuletide atmosphere, was the first of its kind held by the company. Decision was made to make it an annual affair.

Arthur Waskow, assistant superintendent of the plant, was chairman of the arrangements committee.

Arthur Waskow

Serving as toastmaster was Arthur P. Eckley. Community singing was led by George Lewis and Byron Ashenbrenner, two members of the Elks Barbershop quartet.

Among the speakers in addition to the president and founder, Simon Schwartz, were T. Robert Sullivan, vice-president and sales manager; E. L. Merow, secretary-treasurer; Alfred Zoerb, plant superintendent; Jerome Fridenberg of the sales department; Emanuel Siudzinski, a department head, Bernice Kappelman and Cletus Beaupre.

Toastmaster Eckley, in presenting President Schwartz, lauded him for the manner in which he built the Schwartz Manufacturing Company into one of the community's most influential industries that was rich in romance.

Among those to receive bonus checks from President Schwartz and who were welcomed back into the firm were three ex-service men, Melvin Kappelman, Norbert Krey and Ervin Smogoleski.

Following the dinner program the group enjoyed a social period of dancing and cards.

ULTRAVIOLET KILLS BACTERIA

Invisible bactericidal rays sprayed by a new U-shape ultraviolet lamp can reduce the bacteria count in washed milk cans 96 per cent in one minute, the Westinghouse Lamp Division Research Laboratories reported recently.

The report was based upon tests conducted under conditions of contamination more extreme than ever would be encountered in normal service. Although longer irradiation brought slightly better results, for practical purposes in a dairy adequate bacteria-killing efficiency is obtained in one minute. Dr. Harvey C. Rentschler, director of the Laboratories, said the tests showed that the Sterilamp ultraviolet tube was only one per cent less efficient in 45 seconds of irradiation than in one minute.

Bent U-shape to get maximum radiation of all exposed areas in a can, including the hard-to-reach areas in the shouler, the 30-inch-long lamp fits into any conventional size dairy utensil. Operating on standard 110-120 volts alternating current circuits, the unit consumes less electricity than a 25-watt electric light bulb.

PLANT EXPANDS FACILITIES

The Sanitary Farm Dairies, Inc., Houston, Texas, is constructing a one story and basement addition, 30x75 feet, to their present building.

The contract was let for approximately $50,000.00 to the T. D. Howe Construction Company, Houston.

COMPLETES 50 YEARS

Son of Abbotts Dairies' Founder Honored at Annual Company Dinner

George Abbott, son of the founder of Abbotts Dairies, recently celebrated his half century anniversary since joining the company. Mr. Abbott was cited by C. R. Lindback, company president, at the ninth annual dinner of the Abbotts Twenty-Five Year Club. The club membership now totals 242 men and women who have been associated with the company for a quarter of a century or longer.

C. R. Lindback George Abbott

It was on a farm in Salem, New Jersey that George Abbott, the founder, first started in the dairy business. His son often recalls those early days when modern methods of production and delivery were unheard of. "The people who bought their milk in tin cans or brought their own containers never dreamed that some day milk would be left on their doorsteps in sparkling glass bottles," said Mr. Abbott.

Two of Mr. Abbott's sons, George, Jr. and Edward are also with the company and another, Joseph, operates a dairy farm in New Jersey.

KURLY KATE
METAL SPONGES
Designed especially for cleaning all types of dairy equipment and utensils. Will not rust or splinter, cut the hands or injure metal or plated surfaces. Kurly Kate Metal Sponges are fast working, easy to use, and easy to keep clean. Made in STAINLESS STEEL, NICKEL SILVER and BRONZE.
KURLY KATE Metal Sponge
ORDER FROM YOUR JOBBER OR WRITE DIRECT
KURLY KATE CORPORATION
2215 S. MICHIGAN AVE. CHICAGO 16, ILL.

PAMD Convention All Set

Fine Program Taking Final Shape for Fourteenth Annual Convention and Meeting in Harrisburg

Benjamin G. Eynon, executive vice-president of the Pennsylvania Association of Milk Dealers, announces the following preview of the association's annual convention that will be held in Harrisburg, January 29 and 30:

"Andy" Anderson will bring an up-to-date resume on milk supplies. Paul Potter, Paul Potter and Associates, with an excellent background in industry affairs, will talk about labor, one of today's foremost problems. Veteran re-employment, will be treated by John R. Edwards, Supplee-Wills-Jones, who has had extensive experience in working out practical plans for handling this subject.

Dr. Tom Stitts, well known dairy expert, will briefly preview trends in the dairy industry. The National Dairy Council has been doing a big job for the industry, and Neal Kelley will be on hand to tell about it. Owen Richards of ADA will show us how the industry can work with farmers in promoting their program.

I. H. Parkin, Pennsylvania State College, will tell how quality milk can be maintained. Paul Moomaw, tax consultant, will explain how unemployment compensation tax rates may be kept low.

The 1945 Pennsylvania Anti-Pollution Stream Law and its effect on dairy plants will be reviewed by H. E. Moses, Sanitary Engineer, with many years of experience in his field.

George Barber, of Abbotts Dairies, will outline the training program his company has adopted for their milk driver-salesmen. Colonel Ben Castle will report the plans which the Milk Industry Foundation has been making for the industry and will point out the help they will be to us if properly applied. A. J. Claxton, a milk plant operator for many years, will supply a picture of the things to come in future dairy plant operations. Claude Laudenslager will discuss milk deliveries, an important subject these days. Merchandising dairy products will be the subject of George Mellor's address, and his long experience with the Thatcher Manufacturing Company well qualifies him to handle this subject.

How to get it across to employees the benefits they will derive from working in a milk plant will be discussed by the association's General Counsel, W. F. Daniels. Banquet speaker, Roy B. Howells, will furnish the appropriate finale to a day of speech-listening.

Motor Trucks in Dairy Industry

Number in Use and Manufacturer's Rated Capacity as of About the End of 1943

In reply to a recent request, James O. Riley, chief, Inventory and Statistics Section, Highway Transport Department, ODT supplies the following statistics that pertain to motorized vehicles used in the dairy industry:

Description	Manufacturer's Rated Capacity: Under 1½ Tons	1½ Tons	1½ to 3½ Tons	3½ to 5 Tons	5 Tons and Over	Not Shown	Total
Agricultural Dairy Products	819	328	42	8	12	20	1,229
Processing Industries	2,422	2,984	463	35	33	147	6,084
Wholesale Distribution of Processed Dairy Products	11,239	9,828	3,092	254	254	395	25,062
Retail Distribution of Processed Dairy Products	40,909	14,499	2,604	275	364	1,140	59,791
Contract Carriers of Processed Dairy Products	253	474	154	18	38	14	956
Wholesale Distribution of Milk in Tank Trucks	6	94	79	48	111	23	361
Total	55,653	28,207	6,434	638	812	1,739	93,483

Year 'Round Profits with Real Orange Juice!

JUST AN IDEA a year ago... today a reality. Now hundreds of dairies distribute bottled Green Spot ORANGE JUICE... report more sales per stop... year 'round maintenance of volume... year 'round profits!

Green Spot is orange juice condensed at the groves, *stored* at near-freeze temperatures, shipped refrigerated to you. Packed in #10 tins, 6 per case—each #10 tin plus ice cold water makes 5 gals. natural strength orange *juice* averaging 287 I.U. Vitamin C per fluid oz.... at a gross profit greater than that of any dairy product.

U.S. GRADE A FANCY

Quality Confirmed by American Medical Association and U.S. Dept. of Agriculture.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods and Nutrition

JOBBERS EVERYWHERE TO SERVE YOU PROMPTLY

Green Spot

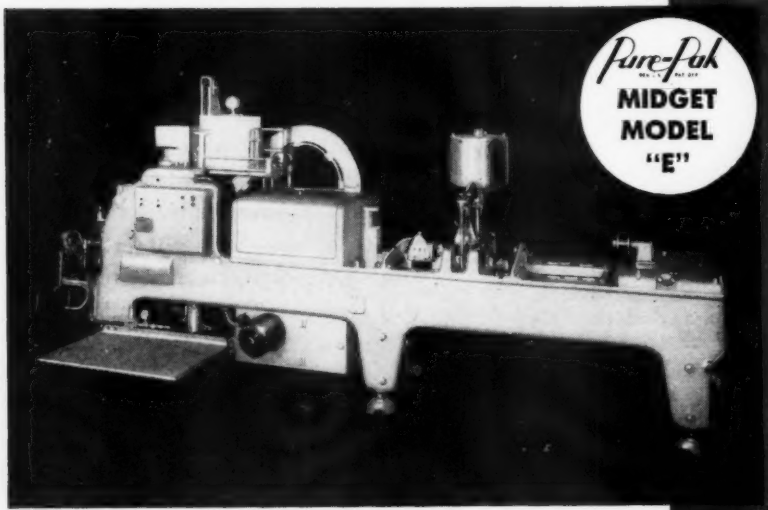
CONDENSED ORANGE JUICE

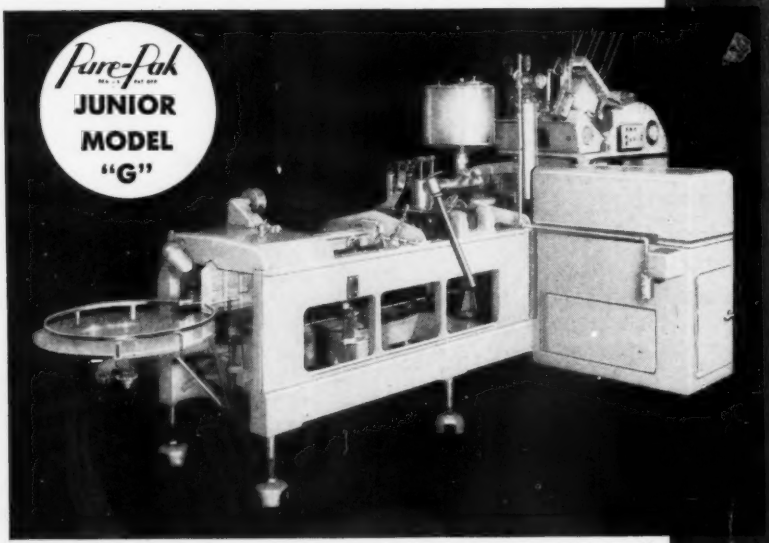
(6 #10 tins per case)

GREEN SPOT, INC. • LOS ANGELES 21

NOW! PURE-PAK MACHINES for MI

Presenting the postwar Pure-Pak line, with improved machines and new models to meet practically any dairy's packaging requirements. These machines are the finest we have ever built—they are faster and more efficient—they are thoroughly dependable in the traditional Ex-Cell-O way. Single or multiple machine installations will give YOUR DAIRY the ideal equipment for the packaging of your products in paper containers.





Now Available:

NEW MODEL "E" MIDGET

Designed to meet the needs of small milk distributors. The original model has been operating efficiently, under actual dairy plant conditions for over two years. Factory-rated speed is 20 containers per minute—universal in design—forms, fills and seals Pure-Pak containers in quart, pint, half-pint, third-quart, and 12-oz., sizes.

NEW MODEL "G" JUNIOR

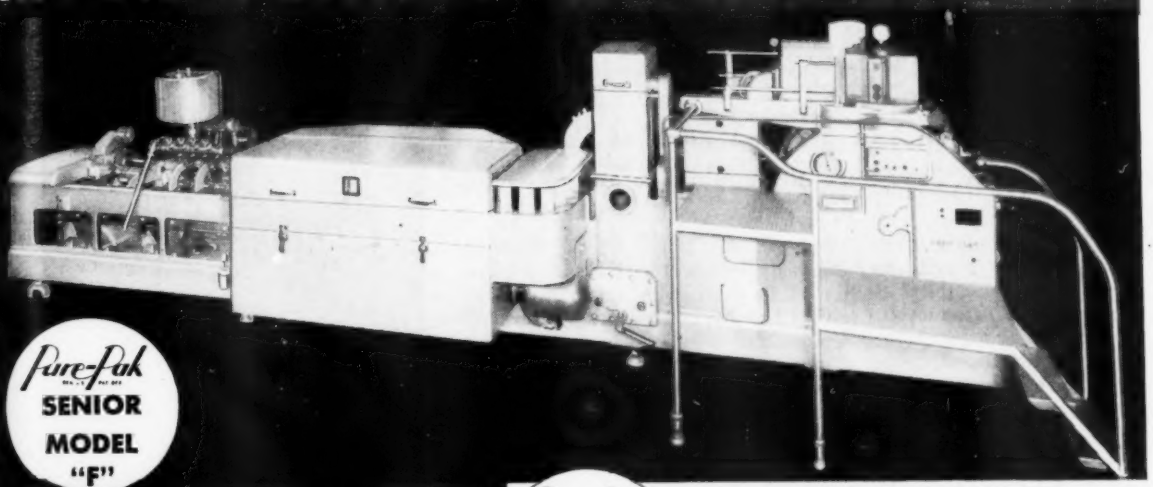
Many improvements and refinements have been added. Produces all sizes of packages as listed under the Midget machine. Operating capacity has been increased approximately 16% to factory-rated speed of 35 containers per minute.

NEW MODEL "F" SENIOR

A host of improvements and mechanical refinements have been made from one end of this machine to the other. Operating speed has been stepped up to 65 operating cycles per minute—producing in excess of 25,000 filled containers in a single shift. This new Senior also produces all sizes of the regular line of Pure-Pak containers.

IMPORTANT NOTICE: The Base Rental established on these Pure-Pak machines is either equal to OR LESS than that for which the prewar Pure-Pak equipment was leased!

MILK PLANTS OF ALL SIZES!

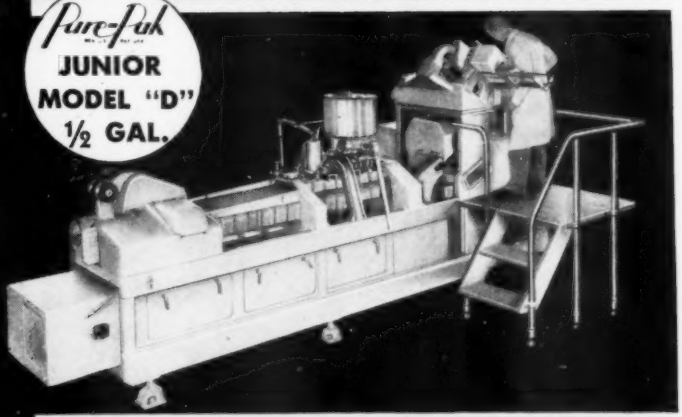


Pure-Pak
SENIOR
MODEL
"F"

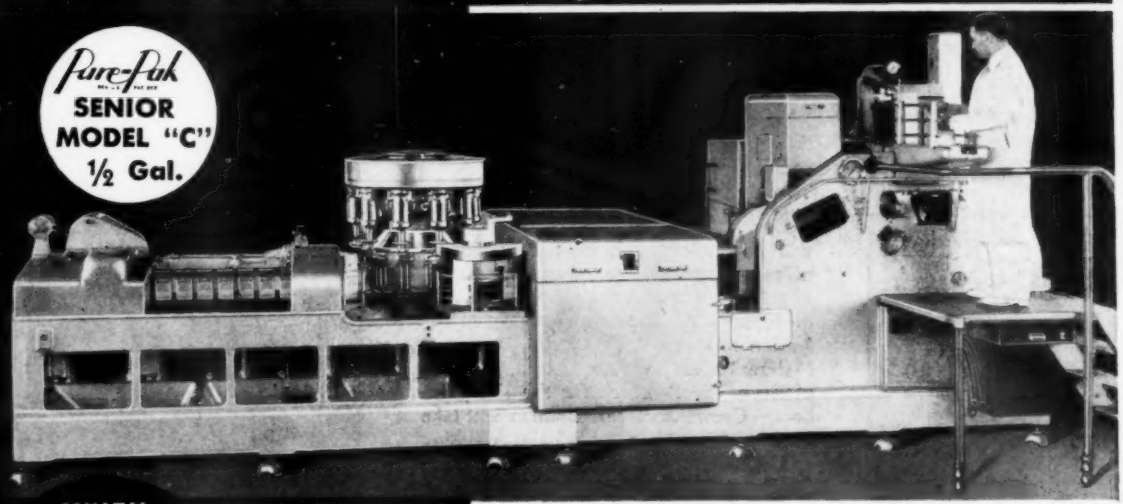
MODEL "D" JUNIOR – ½ GAL.
This machine produces half-gallon size containers only. It has an operating cycle of 25 containers per minute and is just right for plants with medium volume.

MODEL "C" SENIOR – ½ GAL.
Operating cycle of 50 half-gallon containers per minute, with a continuous motion, rotary filling mechanism, which is the last word in modern milk filler design. Where large quantities of half-gallon size containers are desirable, distributors will find this Senior model machine the answer to their problem.

Pure-Pak
JUNIOR
MODEL "D"
½ GAL.



Pure-Pak
SENIOR
MODEL "C"
½ Gal.



WHEN Pure-Pak POURS... IT'S PURE!

• READ THE **Pure-Pak News** PUBLISHED EVERY MONTH. SENT FREE ON REQUEST. *Write Us Today.*

Pure-Pak Division EX-CELL-O CORP. *Established in 1919* **Detroit 6**

• ON THE PRESS: An illustrated specification folder on each of the five machines shown here. Please write for copies and indicate your approximate monthly production in all sizes.

XUM

Annual Dairy Council Meet To Be Staged in Pittsburgh

Winter Conference of Staff and Representatives of Forty-seven Affiliated Units to Take Part in Annual Conference

A PROGRAM of commanding interest awaits those who attend the 27th annual meeting of the National Dairy Council at Hotel Roosevelt, Pittsburgh, Pennsylvania, starting January 9. Combined with the annual meeting will be the winter conference of the National Dairy Council's staff of workers and those of the forty-seven affiliated Dairy Council units.

The business session of the board of directors on January 9 will be followed by a luncheon with Walter D. Fuller, president of the Curtis Publishing Company as speaker. Mr. Fuller's position directing the policies of three of the outstanding national publications keeps him in close contact with all significant national developments. His subject, "Postwar Days in the Dairy Industry" will bring viewpoints of interest and importance to everyone in the dairy industry. Mr. Fuller enjoys a national reputation as a speaker.

On the afternoon of January 9 members of the board of directors of the National Dairy Council will give forceful and dramatic reports to the meeting of the activies of the Dairy Council during the past year. Participants in this discussion will include W. A. Wentworth of The Borden Company in New York City representing ice cream, V. J. Ashbaugh of the Durham Dairy Products Company in Durham, North Carolina representing the milk industry. George Mahle of the Sugar Creek Creamery Company representing the butter industry, M. R. Moomaw, Manager of the Canton, Ohio Milk Producers Association representing milk producers and Wilbur Carlson of the Kraft Cheese Company representing the cheese industry. Milton Hult, President of the National Dairy Council will also participate in and summarize this discussion. That night the entire group will be the guests of the Pittsburgh District Dairy Council, which is now in its 25th year as an affiliated unit of the National Dairy Council.

Milton Hult

Charles W. Holman

Every hour of the day of January 10 will be packed with discussions of significant importance to the entire industry. Highlighting the morning program will be Charles W. Holman, secretary of the National Cooperative Milk Producers Federation and Walter Cotton, Director of Economic Research for the Dairy Industry Committee. Mr. Holman will take for his subject "Federal Policies Affecting Production and Consumption of Milk and Its Products." Certainly no one in the dairy industry is better qualified to handle this subject and to bring the latest information and viewpoints to the group. Mr. Cotton will discuss production, consumption and manufacturing trends of various dairy products in the postwar period. This subject is of vital interest to everyone connected with the dairy industry, and Mr. Cotton's background as an economist for the North Dakota Agricultural College, the National Cooperative Milk Producers Federation, the National Grange and now the Dairy Industry Committee make him an ideal individual to handle this subject.

As a part of the morning discussion also the secretaries of the leading dairy product organizations in the dairy industry will present an outline of the problems most vitally affecting the respective branches of the industry in the postwar period. These include Col. Benjamin F. Castle, president of The Milk Foundation for the milk industry, Dr. E. W. Gaumnitz, secretary of the National Cheese Institute for the cheese industry, Russel Fifer, secretary of the American Butter Institute for the butter industry and Robert Hibben, secretary of the International Association of Ice Cream Manufacturers for the ice cream industry.

The afternoon discussion will be highlighted by Dr. Ancel Keys, Professor of Physiology and Director of the Laboratory of Physiological Hygiene at the Uni-

Walter P. Cotton

Dr. Ancel Keys

versity of Minnesota. He will discuss the nutritional problems of rehabilitation. Dr. Keys has gained a world-wide reputation for his work on rehabilitation diets, in which dairy products play such an important part.

Walter D. Fuller

Dr. Keys' paper will be followed by a round table discussion led by two Dairy Council directors and two industry representatives well acquainted with Dairy Council work and geared to putting into practical application in the Dairy Coun-

Wilbur Carlson

cil Program those problems presented by the dairy industry. Both January 9 and 10 will afford programs of outstanding importance and interest to all members of the dairy industry. January 11 will be devoted to the workers' conference including stock members of the National Dairy Council and the affiliated Dairy Council units.

THATCHER PERSONNEL CHANGES

John B. Miller Becomes District Manager for New England — Other Shifts

John B. Miller has been appointed district manager for New England with headquarters in Boston, according to an announcement by David R. Parfitt, vice-president in charge of sales of the Thatcher Manufacturing Company.

Mr. Miller, who will replace Edward D. Tipton, who resigned, was sales manager of the beer and beverage division. Immediately preceding his Boston appointment, Mr. Miller was assistant to Mr. Parfitt.

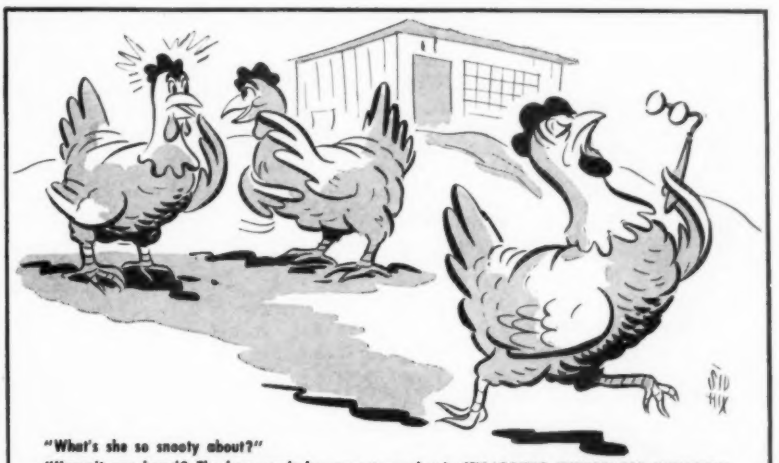
In other sales department personnel changes, George A. Mellor, advertising manager, will assume Mr. Miller's former duties as assistant to Mr. Parfitt. At the same time, he will retain supervision of the advertising department.

Joseph L. Stanley, formerly handling milk accounts for the Rochester branch office, will be transferred to the Philadelphia office where he will take over the milk and general line accounts formerly handled by James R. Carroll, who has resigned December 1.

Howard Blair will be transferred from the New York City office, where he handled milk accounts, to the Rochester office and will take over the territory formerly covered by Mr. Stanley.

LANDER CREAMERY GROWS

Lander, Wyo. — A new unit will be added soon at the plant of the Lander Creamery Company to provide additional cold storage space there.



SELF-LOCKING EGG CUSHION CARTONS

A FEW USERS: American Stores Company ... Armour & Company ... Beatrice Creamery Company ... H. C. Bohack Company Borden Company ... Bowman Dairy Company ... Chestnut Farms-Chevy Chase Dairy ... Colonial Stores ... Cudahy Packing Company Economy Grocery Stores ... Fairmont Creamery Company ... Gristede Brothers ... H. G. Hill Stores ... Jewel Food Stores ... Kroger Grocery & Baking Company ... Land O'Lakes Creameries ... National Tea Company ... Safeway Stores, Inc. ... Swift & Company ... Wilson & Company.

SELF-LOCKING CARTON COMPANY
599 E. Illinois Street Telephone: SUPerior 3886 Chicago 11, Illinois

★ Pacemaker in Egg Packaging ★

Training Young Londoners As Practical Dairymen

(By Hubert E. Bird, Well-Known British Broadcaster and Writer on Industrial Subjects)

The London evacuee schoolboy whose cryptic essay on the cow dismissed her as "a machine for making milk" spoke with the condensed wisdom of his own experience. Her crescent horns, her tasselled tail, had their uses, no doubt, but *he* saw her from the strictly business angle. It was up to her to do the job efficiently.

The wartime dairy farmer in Britain has had to take the same strictly functional view of his cattle. The thinning out of dairy herds, consequent on drastic cuts in imported feeding stuffs and the ploughing up of grasslands, was not entirely a bad thing. Milk quantities fell, but judicious culling meant a better overall quality. Artificial insemination from pedigree sources will play a great part in rebuilding British dairy herds, for meeting the British ration from depleted herds has proved that quality-breeding pays.

The limited quantities of fresh milk lately available to the urban consumer in Britain have borne in on him the importance of a sound dairying industry in the national economy, and the exacting wartime food-control standards have made it clear that short supply cannot be made to justify any falling off in quality. Nothing has fully demonstrated more the importance of milk as a basic food than the shortage of it.

Acute Distribution Problems

World War II has played havoc with the distribution of milk in urban areas. In London today the problems of distribution are seen at their acutest. Transport restriction and consequent delays in delivery are still considerable. The journey of the milk from cow to kitchen takes today an unconscionable time, and consequently greater is the vigilant care required to see that it reaches the consumer with maximum purity. This is not merely a matter of public conscience; it is also a point of intelligent education.

The London County Council has long been a name synonymous with public welfare. Its education schemes, for young and old, have always been marked by their bold and comprehensive character, on the social as well as the technical plane. The two issues met in the L.C.C. scheme for the education and training of dairymen, milk roundsmen and dairy shop assistants.

Extent of Curriculum

The curriculum ranges from elementary courses of 12 lectures on the practice and hygiene of local milk distribution to two-yearly courses in which the laboratory looms largest on industrial milk-processing. These last culminate in the statutory examinations of the London City and Guilds. In addition, there are short courses of half-a-dozen lectures on special aspects of milk distribution, such as business administration and practical dairy management.

Recently the London County Council scheme for dairymen, shelved during World War II, was restarted. Its prewar history was on a small scale. Numbers were mediocre, interest tepid. But one of the curious results of food being importantly publicized as a munition of war that must not be wasted and an industry that felt no wartime slump, has been to focus interest on it as a basic element in the national economy. Milk in particular, appearing dried and canned from abroad on the wartime larder shelves, is scheduled for further attention by several multiple food processing firms.

It is the job of the L.C.C. technical education authorities to keep their fingers on the pulse of trade trends; and it is significant that they have so soon reopened their school of dairy training. They start with some real disadvantages. The building which housed the main dairy school at Smithfield in the City of London got a direct hit from a bomb in one of the earlier enemy air raids. Laboratories and equipment were totally destroyed. The dairy school's new life begins in makeshift premises with "labs." and classrooms of a "utility" bareness. Most practical classes are given in the premises of sympathetic dairying firms—notably the co-operative societies.

Methods of Industrial Processing

The L.C.C.'s two-year courses for the city and guilds' examination make the straightforward biological and chemical approach. Practical studies cover the basic processes of pasteurization and sterilization and their micro-biological and biochemical background. This inevitably embraces methods of industrial processing, and the scientific and purely technical courses are rounded off with a refresher course on factory management and business organization.

This eminently practical course is staffed by working dairymen, scientific specialists and good grade business men from some of London's biggest multiple stores. The students are given all the working aspects of a job they may like to do. Any youth who *wants* to be a dairyman, and a good one at that, can learn his job thoroughly at the L.C.C.

The teachers are sad that the bomb in Smithfield fell on their school. "We had looked forward to making a post-war return as a first-class school, complete with our own model dairy, and, if the numbers came up to scratch, perhaps a small model factory. These plans will now have to wait, but not, we hope, for too long."

BEATRICE CREAMERY REPORT

In his quarterly report to the stockholders of Beatrice Creamery Company, C .H. Haskell, president, stated that the net profit of the company for the three months' period ended November 30, 1945, which is the third quarter of the company's fiscal year, was $388,214.08, equivalent, after provision for dividends on preferred stock to $0.63 per share of common stock. This compares with a profit of $378,972.03 or $0.63 per share of common stock for the same period of 1944.

The accumulated net profit for the twelve months' period ended November 30, 1945 was $1,931,699.42 and, after provision for preferred dividends, is equivalent to $3.27 per share of common stock.

Net sales for the quarter were $31,930,536.89, as compared with $27,722,451.03 for the corresponding period of last year, an increase of 15.18 per cent.

On November 29, 1945, the directors declared the regular quarterly dividend of $0.35 per share of common stock plus an extra dividend of $0.65 per share, payable January 1, 1946. Dividends equaling $2.05 per share of common stock were declared during this fiscal year.

CRYSTAL DAIRY EXPANSION

The Crystal Dairy, now located at Westchester Avenue and 152nd Street, the Bronx, New York City, will build a $500,000 plant at Brook Avenue and 164th Street, the Bronx, according to Charles N. Whinston, architect.

The building will be one and two stories high, the ground floor covering an area of 60,000 square feet.

Sees Farm Position Affected

N. Y. Agricultural Commissioner Du Mond Looks for Less Demand and Lower Prices Unless Reconversion Speeds Up

Albany, N. Y.—A number of things may occur to reduce farm production in 1946 "and still make the outcome about as satisfactory as it was last season," in the opinion of Commissioner C. Chester Du Mond of the New York State Department of Agriculture and Markets.

Speaking from Radio Station WGY at Schenectady December 27 Commissioner Du Mond said:

"First, the wartime pressure is relieved, and it may be that many farmers will find it advisable to relax somewhat from efforts which should not be required of them in normal times. Second, we may find that the outlook for prompt industrial reconversion may not be too good. In such a case, it would seem advisable that we as farmers voluntarily curtail our crops to some extent. The failure of industrial reconversion may result in a lessened demand and lower prices. We may also find the weather an important factor.

Milk Situation Causes Concern

"The matter which is giving everyone the greatest concern is the milk situation. In our preliminary conferences which were held prior to our holding hearings on proposed amendments to the New York Milk Order, it was brought out that there probably will be a surplus of milk over fluid demands of over three hundred million pounds for the month of June, 1946. Some of this surplus might go into increased fluid milk, cream, and ice cream consumption. Certainly it will not be needed for the production of dried milk powder in as large a volume as it was used in 1945.

"This surplus above fluid demand will come at just about the time when it is proposed to remove subsidies and, unless some other provision is made so that price of milk can rise in New York City, it would seem that the price of milk to the producer must be lowered by the amount of the subsidy. Under the provisions of the New York City Milk Marketing Order the various producers' organizations have petitioned that the price of milk to the producer be considerably increased. I am advised that this is possible, even under present OPA price ceilings, should their petition be granted after hearing by the Commissioner and the Secretary of Agriculture. This is because Federal Trade Agreements are exempted under the OPA laws. In our up-state milk marketing orders it would not be possible for the Commissioner to grant such an increase unless OPA restrictions were removed.

Seasonal Production Leveling Needed

"The matter becomes further involved, because it is very questionable whether, under existing costs of production, the producer can afford to produce milk without the present subsidy or an increase in price to compensate for it. On the other hand, should the price be increased to the consumer, there is a possibility that some drop in consumption might occur. This whole situation emphasizes again the pressing need for a leveling out of our milk production so that we will not be faced with a milk shortage in November and have twice what we need for fluid use in June. This dislocation has been increased by our all-out production for the war emergency.

"This whole matter is so vital to the interests of our New York State Producers that it will be handled by our Department, where it is concerned, with the greatest possible consideration for fairness to everyone. We hope that some equitable solution can be found so that neither our producers of milk nor the great body of milk consumers will feel that an injustice has been done."

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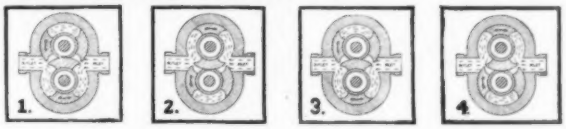

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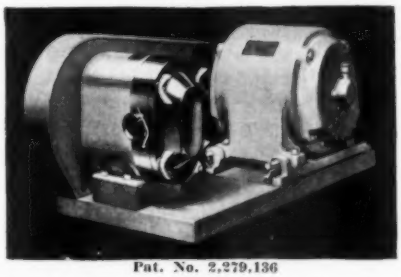

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A Comparison of the Cleaning of SQUARE AND ROUND MILK BOTTLES Under Regular Commercial Conditions

By T. V. Armstrong and L. H. Burgwald, Department of Dairy Technology, Ohio State University

THE CONVERSION from the round to the square glass milk bottle, which has taken place in many markets, represents a radical departure from the conventional type of round bottle which has been in use since the year 1899.

Many questions arise at the outset of this change, such as the durability, ease of handling, and the ease of cleaning this bottle as compared with the old type.

This study is concerned with the comparative cleansibility of the square bottle and its degree of sterility as compared with the round bottle when washed under identical conditions. The study was conducted in a city of over 300,000 inhabitants which is served by about thirty milk distributors.

Washed bottles were obtained from seven different makes of washers in nine of the plants operating in this market. The bottles were collected during the months of June, July, August, and September, of 1945.

Some of these washers were able to accommodate the square bottle without any change or adjustment, while other makes had to undergo adjustments before the new bottle could be handled.

The dirty bottles used in this study were the regular run of bottles as returned to the plant from various sources, such as homes, stores, restaurants, etc. In following this plan it was believed that this type of soiled bottle going through the washer would be more nearly representative of the average dirty bottle than bottles which were artifically soiled by the addition of various materials.

Some of the plants were using both the square and the round bottles and were able to supply both types of soiled bottles. In cases where the plant was using only one type of bottle, it was necessry to supply the other shape from the dirty bottles returned to a plant which was using the latter type.

The bottles were usually taken in lots of a dozen or more of each kind from the delivery end of the washer, and carefully capped, using caps from freshly opened tubes. The bottles were then taken to the laboratory where the bacteria count was made. The time between collecting the bottles and making the count seldom exceeded one hour. The bottles were kept in the refrigerator in all cases where it was not possible to make the count immediately upon arrival at the laboratory.

In plants where the final rinse water contained chlorine, 20 cc. of buffered sterile water containing sodium thiosulfate was immediately added to the bottle to check the germicidal action of the chlorine at that point. The bottles were then capped and shaken with a rotary motion causing the entire inner surface of the bottle to be rinsed with the solution. The Seal-Kap type of cap, which covers the pouring lip was used throughout this study.

When the bottles were taken from machines which had no chlorine in the final rinse, the 20 cc. of buffered sterile water was not added to the bottles until the time of making the plates.

The procedures followed in the laboratory, in making the counts are those as outlined in the Eighth Edition of "Standard Methods for the Examination of Dairy Products" published by the American Public Health Association (1).

The caps were carefully removed from the empty washed bottles and 20 cc. of sterile buffered water added from screw top vials. After this the caps were replaced. This step was unnecessary when testing bottles taken from washers using a final chlorine rinse, since such bottles had the buffered water added immediately after being taken from the washer.

The bottles were then uniformly shaken as specified and 1 cc. and 2 cc. portions transferred to sterile petri dishes. Standard tryptone, glucose, extract agar medici was used and the plates incubated for 48 hours at 37 deg. C. The counts were recorded in terms of bacteria per bottle.

The directions for making the sterile buffered water blanks are specified in the procedures outlined in "Standard Methods" (1).

Immediately after plating, the remainder of the water was dumped from the bottles and the bottles later examined under a daylight lamp. The presence of specks or streakiness was noted when it occurred in any of the bottles. The bottles were then filled with milk and again examined for dirty specks or streakiness. By this method of examination, the presence of white specks were easily detected when the empty bottle was examined and any small dark specks or traces of soot which were overlooked in the first examination were more easily detected after the bottles were filled with milk.

Thirty-five different lots of quart bottles were collected and examined during the study. These were taken at eight plants and from seven different makes of washers. The following is a summary of the data obtained on the quart bottles.

(1) "Standard Methods for the Examination of Dairy Products." The American Public Health Association, Eighth Edition, 1941.

QUART BOTTLES

	Square Bottles Number	Square Bottles Per Cent	Round Bottles Number	Round Bottles Per Cent
Total number of bottles tested	447		448	
Bottles sterile	89	19.9	80	17.8
Bottles with count 1-100	186	41.6	182	40.7
Bottles with count 101-1000	153	34.2	152	33.9
Bottles with count over 1000	19	4.3	34	7.6
Average bacterial count	221		283	
Average count of bottles having more than 1,000 bacteria per bottle	2,405		2,106	
Average count of bottles having less than 1,000 bacteria per bottle	101		133	
Bottles with visible dirt (empty)	5	1.1	20	4.5
Bottles with visible dirt (filled with milk)	5	1.1	24	5.4
Streaked bottles (empty)	8	1.8	3	.7
Streaked bottles (filled with milk))	0	0	1	.2

From the foregoing table we find that only 4.3 per cent of the square bottles had counts in excess of 1,000 per bottle and 7.6 per cent of the round bottles also had counts in excess of 1,000 per bottle.

1.1 per cent of the square bottles contained specks of dirt and 5.3 per cent of the round bottles were similarly classified.

Fifteen different lots of one-half pint bottles were collected and examined during the study. These were taken from seven plants and from six different types of washers. The following is a summary of the data obtained with the one-half pint bottles.

ONE-HALF PINT BOTTLES

	Square Bottles Number	Square Bottles Per Cent	Round Bottles Number	Round Bottles Per Cent
Total number of bottles tested	187	.....	198	.....
Bottles sterile	47	25.2	53	26.8
Bottles with count 1-100	104	55.6	102	51.5
Bottles with count 101-1000	18	9.6	26	13.1
Bottles with count over 1000	18	9.6	17	8.6
Average bacterial count	197		121	
Average count of bottles having more than 1,000 bacteria per bottle	1,725		954	
Average count of bottles having less than 1,000 bacteria per bottle	35		42	
Bottles with visible dirt (empty)	0	0	16	8.1
Bottles with visible dirt (full of milk)	0	0	17	8.6
Streaked bottles (empty)	2	1.1	2	1.1
Streaked bottles (filled with milk)	0	0	2	1.1

From these figures we find that 9.6 per cent of the square one-half pint bottles had counts in excess of 250 per bottle

Spreading the Dairy Gospel

Miss June Bricker, nutrition director for the Connecticut Dairy and Food Council, standing center, has found another novel way to convince girls' club groups that they should consume more milk and dairy products. It is one of the "keys" to success she is explaining at this "Charm School" in the Hartford, Connecticut, Y. W. C. A.

Ken Geyer, manager of the Connecticut Milk Producers Association at Hartford, is president of the Dairy Council unit there. Other members of the Board include: Abner Mitchell of the Mitchell Dairy Co., Bridgeport; C. Marsden Bacon, president of the Connecticut Milk Producers Assn.; Arthur G. Weigold of the Torrington Creamery Co., Inc., Torrington; C. Raymond Brock of the Brock Hall Dairy Co. of Hamden; Lynn H. Grant of Melrose; John Lyman of Middlefield; Warren Chapman of the Bryant & Chapman Co., Hartford; A. C. Peterson of the A. C. Peterson, Inc., of West Hartford; Eugene Lamphier of Watertown; and Robert C. Mitchell of Salesbury.

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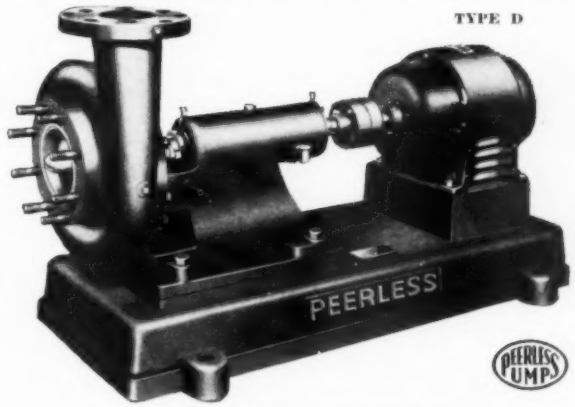

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Peerless Type D, illustrated above is widely used in the milk industry for general services. It is built with direct motor drive and also with belt drive. Single-end suction, single-stage. Cast iron case with enclosed bronze impellers and bronze fittings. The impeller is fitted with integral seal rings which minimize axial thrust and increases efficiency. All parts readily accessible. Mounted on substantial machined cast iron base plate. Shaft assembly mounted on two single-row ball bearings capable of taking thrust loads in either direction. Sealed bearings at end prevent intrusion of dust or water creeping along the shaft. Guaranteed to deliver rated capacity and head when properly installed.

Discharge — 1"-1½"-2"-2½". Ten to 1000 gallons per minute. Heads from 10 to 250 feet. One to 30 horsepower.

Peerless Horizontal Pumps (formerly Dayton-Dowd) include practically every type, for any pumping need.

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while 8.6 per cent of the round bottles were in the same classification.

No visible dirt was observed in any of the square one-half pints while visible dirt was observed in 8.6 per cent of the round one-half pints studied.

At the time of collection of the washed bottles, general observations were made regarding the method of washing and data was taken on the time of washing and temperatures of soaking tanks. Samples of the washing solution and chlorine rinse water was also obtained when possible and these samples tested for strength in the laboratory. In some cases the operator did not have the facilities for testing their own solutions and in a few instances were operating on lower strengths of solutions than they believed the tanks to contain. In most cases, adjustments were made to bring the tanks up to the desired strength of solutions.

A study of the data regarding strength of the solutions in the soaking tanks and temperatures of those tanks does not show any direct correlation with the bacterial count of the bottles. The data does show that when the temperature of the soaking tank falls below 140 deg. F. there is a tendancy for the bacterial count to increase regardless of the strength of the solution. Likewise where the strength of solution falls below 1.0 per cent caustic the average count of the bottles is higher than the average of the bottles which were subjected to a higher concentration of caustic.

These results are in agreement with the data published by Holmquist (2) et al in the "American Public Health Yearbook of 1934-35".

The foregoing observations were taken from the following table which includes the average counts made on all quart bottles not subjected to a chlorine rinse. The one-half pint bottles were all washed at temperatures above 140 deg. F.

COMPARISONS OF THE EFFECT OF VARIATIONS IN CAUSTIC STRENGTH AND TEMPERATURE ON BACTERIA COUNT OF BOTTLES

Strength of Caustic	Average Percent Caustic	No. of Bottles	Average Bacteria Count Square Bottles	Round Bottles
.10-1.00%	.51%	47	477	496
1.01-5.30%	2.41%	244	301	261
Temperature of Soaker Tank	**Average Temperature**			
132-140°	137°	64	408	389
141-165°	152°	227	284	268

2"Report of Committee on Milk Supply." American Public Health Association Yearbook, 1934-35; page 160.

Nurses Get Their Lessons

Central Dairy Council, Louisville, Ky., believes in keeping nurses sold on dairy products. A group of nurses at St. Joseph's Hospital hear about dairy products from a Council representative.

President of the Central Dairy Council is B. A. Thomas, who is also president of the Falls Cities Milk Producers Association of Louisville. On the board of directors are: Fred Flynn, Secretary, Milk for Health, Inc.; H. H. Neel of the Ewing-Von Allmen Dairy Co. of Louisville; A. M. Carson, the Cherokee Sanitary Milk Co.; Milton Beere, Walnut Grove Dairy; R. B. Fenley, Fenley's Model Dairy; Irving Scharf, Purity Made Products Co.; W. E. Menagh, Swift & Co.; and five others all representing the Falls Cities Milk Producers Association as follows: R. N. Duncan, Louisville; Norman Dreyer, Sellersburg, Indiana; W. L. Osborne, Rineyville, Kentucky; E. S. Shehan, New Bloomfield, Kentucky; Fred Kisler, New Middletown, Indiana.

Any attempt at further summarizing the data according to caustic strength or temperature of soaking tank is tantamount to arranging the data according to the different plants cooperating in the study. This is due to the fact that the caustic strengths and temperatures used by each plant were fairly constant from day to day. The following is a recapitulation of the data on quart bottles according to the plants from which the bottles were taken.

SUMMARY OF DATA FROM EACH PLANT

Plant No.	No. of Bottles	Avg. Temp. of Tank	Avg. % Caustic	Avg. Chlorine p.p.m.	Square Bottles Avg. Count	Square Bottles % Dirty Bottles	Round Bottles Avg. Count	Round Bottles % Dirty Bottles
8	23	150°	.10	0	365	0	250	0
7	48	135°	.77	*	497	0	679	4
3	144	149°	1.25	0	103	1.4	157	12.5
1	216	159°	1.33	35	135	0.9	99	0
6	24	175°	2.00	4	85	0	213	0
2	228	152°	2.30	*	257	2.1	181	7.1
5	95	163°	2.77	*	285	0	865	2.0
4	96	143°	4.26	0	375	0	452	2.0

*Note—Chlorine was used in two of these plants (Nos. 2 and 5) only part of the time. In the other plant (7), no provisions were available for obtaining a sample of the chlorine rinse. Plant No. 7 used some metasilicate in the second soaker tank in addition to the caustic used.

Two of the washers used in this study were a combination of soaker tanks and mechanical brushes; one was an air brush type and the others straight soaker tank types.

As was earlier mentioned in this paper, a part of the bottles studied had been exposed to a final rinse which contained chlorine while the remainder were rinsed with unchlorinated water. Approximately one-half of the bottles were subjected to each treatment. The added bactericidal action of the chlorine spray is shown in the following two tables:

Effect of Chlorine Rinse (Quarts)

	Chlorine Rinse Used Square No.	%	Round No.	%	No Chlorine Used Square No.	%	Round No.	%
Total number of bottles tested	192	.....	192	.....	255	.....	257	.....
Bottles sterile	75	39.1	68	35.3	14	5.5	12	4.7
Bottles with count of 1-100	95	49.4	95	49.4	91	35.7	95	37.0
Bottles with count of 101-1000	19	9.9	28	14.6	134	52.5	125	48.6
Bottles with count over 1000	3	1.6	9	4.7	16	6.3	25	9.72
Average bacteria count	117	.....	177	.....	299	.....	362	.....
Average count of bottles having more than 1,000 bacteria	5,407	.....	2,535	.....	1,909	.....	1,952	.....
Average count of bottles having less than 1,000 bacteria	39	.....	61	.....	140	.....	171	.....

Effect of Chlorine Rinse (One-half Pints)

Total number of bottles tested	125	.....	132	.....	62	.....	66	.....
Bottles sterile	36	28.8	43	32.6	11	17.7	10	15.2
Bottles with count of 1-100	69	55.2	70	53.0	35	56.5	32	48.4
Bottles with count 101-250..	7	5.6	12	9.1	11	17.7	14	21.2
Bottles wtih count over 250	13	10.4	7	5.3	5	8.1	10	15.2
Average bacteria count	80	.....	91	.....	435	.....	180	.....
Average count of bottles having more than 250 bacteria	547	.....	1,157	.....	4,790	.....	811	.....
Average count of bottles having less than 250 bacteria	25	.....	31	.....	54	.....	67	.....

Conclusions

An analysis of the foregoing data shows that in some instances the lots of square bottles have average counts slightly lower than those of the round bottle, while in other instances the round bottles have the lower average counts. On the whole the resulting counts are comparable.

The results on the cleanliness of the bottles do not reflect the uniformity that is exhibited in the bacterial condition of the bottles.

During a period of transition from the use of one type of bottle to another it is possible that the return of the round type might be slowed up to the extent that a few of those bottles accumulated sediment that was more difficult to move. This is undoubtedly the reason why more round bottles showed visible dirt than square ones. The variation in sizes and makes of washers used in the different plants are also factors to be considered. Some of the plants had no visible particles in any

of the bottles collected while seven per cent of the bottles received from one of the plants contained visible particles.

The number of bottles included in this study are no doubt inadequate to represent an exhaustive study of this phase of the question. The results have not revealed any added difficulty in the washing and sterilizing of the newer type of milk bottle due to the change in shape.

Summary

We conclude from these studies and data that there is no difference in the commercial practicability of cleansing and sterilizing the returnable square milk bottle and the conventional round bottle in typical dairy soaker equipment.

Preparing For This Year

Theodore G. Montague, President of The Borden Company, Outlines Plans

Expenditures of approximately 23 million dollars in the coming year are anticipated by the Borden Company for extension and improvement of equipment and properties, according to a late statement by President Theodore G. Montague. Although the company faces no major problems of plant reconversion as a result of the war, it was called upon to make huge increases in production during the war years to meet military and lend-lease requirements as well as civilian needs. Most of these increases had to be achieved with existing equipment and plant facilities temporarily adapted to the purpose.

Theodore G. Montague

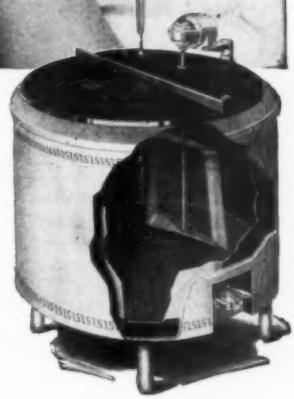
The requirements of the company are varied as to items and localities in which needed. The major ones are motor vehicles of all types; processing machinery; and refrigerating equipment. The need for replacements exists in all territories in which the company operates plants and embraces all product groups.

The sum of 23 million dollars represents a sharp increase over the company's average annual expenditures for such purposes and reflects in part increased costs in material as well as the extensiveness of replacements required, Mr. Montague pointed out. It is hoped that most of the projects may be completed in 1946.

This expenditure reflects the feeling of the management of the Borden Company as to its responsibilities in the coming year of continued readjustment to a peace-time economy. These responsibilities are not only to the consuming public that the company serves with its goods, but to the more than 100,000 farmers and other suppliers of agricultural raw materials; to its 27,000 employees who process these raw materials and distribute them; and to the 49,000 stockholders who own the company.

To fulfill this obligation the company must operate at maximum efficiency in the years to come, Mr. Montague concluded. It must continue its program of research to devise new products of merit and improve existing ones. And, through promotional and educational programs: it must provide new and expanded markets to absorb the vastly increased capacity achieved under the stimulus of war need.

Photo by Harold M. Lambert.



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With but 158° of water heat, the milk comes quickly to pasteurizing temperature. This rapid heating, together with the gentle agitation, means a much deeper cream line, improved raw-milk flavor, and increased profits for the wise dealer who owns a PURITY.

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Radio Milk Promotion

St. Lawrence Dairy in Reading, Pa., Wins Young Friends with Seasonal Holiday Broadcasts

"Stories of people far and near, music to bring you Christmas cheer,"—that was the recent successful radio formula of the St. Lawrence Dairy Company of Reading, Pa.

In a special pre-holiday promotion the dairy sponsored "Your Christmas Story Teller," a fifteen minute program, heard over WRAW, Reading from 7:30 to 7:45 P.M. Monday, Wednesday, and Friday from December 3 to December 25.

"Christmas Story Teller," Gini Price

Appealing primarily to family groups, especially children, the 10-program series featured such familiar Yuletide legends as "A Christmas Carol," "Candle in the Forest," and "Twas the Night Before Christmas." Transcribed carols and interesting antedotes about Christmas traditions and customs rounded out the program.

The program was sponsored by the St. Lawrence Dairy Company as an institutional promotional, hence there were no commercial messages during the broadcast. A 30 second opening and closing announcement said merely: "For 37 years the St. Lawrence Dairy Company has served the families of Reading and Berks County. It is their wish that you may enjoy this series of holiday programs as much as they have enjoyed your patronage."

On the two days preceding the initial broadcast the dairy distributed 13,000 bottle collars publicizing the series. Showcards displaying an 11 x 14 photograph of "Your Christmas Story Teller," Gini Price, were placed in each of the dairy's three luncheonettes for the entire period of the program. One entire front window of the dairy's main luncheonette was devoted to a display of children's books and toys tieing in with the theme of "Your Christmas Story Teller."

Best evidence that the holiday radio series built friends for the dairy was the enthusiasm which drivers reported from customers and prospects alike. Even more gratifying was the fact that pleased listeners themselves called the dairy during the entire series to report their own and their children's enjoyment.

"Your Christmas Story Teller" was planned and produced with the cooperation of the program department of WRAW and Beaumont, Heller & Sperling, Inc., the advertising agency for the St. Lawrence Dairy Company.

Developments in Food Transportation

Four long strides forward in the world of food soon may combine to give the housewife or chef an unlimited choice of "fresh in-season" menus, no matter where the food is grown, where it is served, or when.

These developments, reported to the Refrigeration Equipment Manufacturers Association, include:

1. Plans of major airlines to greatly expand shipments of fresh fruits, vegetables and other foods so that they will arrive on any market in a matter of hours after they are harvested in any part of America and many parts of the world.

2. Improved packaging of perishables while fresh including lighter packages for air-borne shipments, on-the-spot "prepackaging" to reduce spoilage, and family-size packaging for refrigerated display and self-service in stores.

3. New type refrigerated display cases for perishables in stores, thus keeping "fresh foods fresh" several days longer than heretofore has been possible.

4. Far wider use of new facilities in homes, apartment buildings, stores and locker plants for preparing foods for freezing, properly freezing them and storing them after frozen —thus keeping the "freshness in" for indefinite periods.

Creameries of America Earnings

Los Angeles, Cal.—Net earnings of Creameries of America, Inc., for the firm's third quarter ending September 30, amounted to 66c per share of common stock. During the same period last year the net earned per share of common was 62c. The 1945 ninemonths' net earnings per share were $1.91 as against $2.53 net for the full year of 1944.

The third quarter report shows consolidated net income after all taxes of $318,570.88 with total sales of $7,779,000.56,

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Factory Mgr.
Washington, D. C.

a 9.2 per cent increas in sales over the same three months in 1944. Net income for the third quarter in 1944 after all income taxes was $299,658.03 with total sales of $7,122,762.81.

The consolidated net income for the first nine months of 1945 was $964,615.78, an increase of $118,412.32, over the same period last year.

The balance sheet as of the above date showed current assets for the nine months since January 1, to be $6,178,221 and current liabilities of $2,993,604. Working capital stood at $3,184,618.

Supplee-Wills-Jones Promotions

Philadelphia, Pa.—Promotions of three top operating executives were announced January 1 by Supplee-Wills-Jones Milk Company. Albert I. Supplee, general manager of the Ice Cream Department, was advanced to manager of all city processing plants, three in Philadelphia, another in Camden, N. J., and the third, Clover Dairy, at Wilmington, Del. Mr. Supplee started with the company in 1932 and has served in the sales, processing and ice cream departments.

Stephen W. Pendergast, store and wholesale milk sales manager, was appointed ice cream sales manager. Prior to joining Supplee, in January, 1939, he was with Hydrox Ice Cream Company, New York unit of National Dairy Products Corporation, in its sales department and in experimental store modernization work in the field. After a year as ice cream salesman with Supplee he moved up to head the wholesale milk sales forces in February, 1940.

Named to succeed Mr. Pendergast was B. Roy Norton, Jr., for the past year assisting Supplee's country plants manager. Mr. Norton also started in the dairy business with a New York National Dairy unit, Sheffield Farms Company, where he entered the production department, soon was made chief production clerk and later was assigned to Sheffield's experimental work on two-quart paper containers for home milk delivery. Joining Supplee in December, 1939, Mr. Norton began as an ice cream salesman, later was shifted to the milk processing department and then went to the country plants division on a temporary assignment in helping to supervise Supplee's 14 country receiving and manufactured products plants.

Victory Bond Purchase

Paul E. Reinhold, (center) president of Foremost Farms, Inc., largest dairy company with general offices in the South, is shown purchasing $1,000,000 in U. S. Treasury Bonds from Clyde C. Pierce, Jacksonville, Fla., investment broker. Transaction took place at the recent annual managers' meeting of Foremost Farms, held at Jacksonville, St. Petersburg and Lake Wales, Fla. Watching Mr. Reinhold make the purchase for Foremost is J. R. Lindley, treasurer of the company.

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What Lies Ahead For the DAIRY INDUSTRY IN 1946?

Dr. Tom G. Stitts, Director, Dairy Branch, USDA Speculates on the Future Before the American Farm Bureau Federation Annual Meeting in Chicago

EVERY YEAR about this time we have "open season" on speculation as to what lies ahead for dairying and other agricultural enterprises. It's a very important part of our planning for the future, and I welcome the opportunity to participate in it. At the same time, I find it difficult to decide what to talk about.

Dr. T. G. Stitts, Director Dairy Branch, Production and Marketing Administration.

I know that dairy farmers are mainly interested in knowing what their income is going to be in 1946, and rightly so. This feeling of anxiety means that they are keenly aware of the fact that their income is subject to change in the months to come. It means that they are attempting to measure the impact of the transition from war to peace. For the past three years, war stimulated demands have pressed the price of dairy products against fixed ceilings and subsidy payments have been announced months in advance. This left little doubt about the level of prices and incomes. But what happens now that the war is over? That's the question milk producers and the rest of us are wondering about.

A completely satisfactory and definite answer is not readily possible at the present time. Even under the most stable conditions, speculation in respect to future incomes is subject to wide errors. We have an entirely different and more complete set of circumstances. We have to consider the outlook for dairying during a period in which our whole economy will be in a state of transition — or reconversion — or whatever we call it. Actually, the welfare of dairying will depend more on the success of our over-all national economic program than on anything else. This will condition all programs having to do with price support, price ceilings, and subsidy payments. The real answer is to be found in the conversion of our whole ecnomy to peacetime operation. The success we achieve in maintaining national income and national employment at high levels will determine the final result.

You should not infer, however, that I am suggesting that nothing can and should be done in the dairy industry during the next year. Quite to the contrary, I can say without hesitation that the dairy industry has its own specific and individual problems. These problems require the continuous development of a wise government policy and sound programs necessary to effectuate that policy. Many people both in and out of the Government are endeavoring to arrive at a definition of those programs and to announce them as soon as possible.

The foremost problem undoubtedly is the complex and inter-related question of subsidies and ceilings. The Department of Agriculture is on record that its policy calls for the removal of both ceilings and subsidies at the earliest feasible time. The most feasible time for producers might not coincide with the Government's program to prevent prices from breaking into a runaway inflation. By the same token, the most feasible time for controlling inflationary forces might prove an obstacle to the Government's pledge to support farm prices. In shaping the dairy program of 1946 and 1947, we must keep in mind the Government's obligation to (1) support farm prices and (2) regulate and possibly reduce the danger of inflation. These obligations go hand in hand. The problem before the dairy industry is the problem of resolving these intentions in a common policy. We could accomplish either and with the greatest of ease if we calmly disregarded the other obligations. A government, however, cannot forego its

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obligations. They must of necessity be held in balance. Our primary task is to achieve and maintain that balance. Such are the underlying principles to which we must adhere in guiding our program to its final end.

An examination of our current conditions will throw light on the available paths we may take. Our appropriation to make dairy feed payments runs out on June 30, 1946, and already we have announced the payment rates through March 31, 1946. Unless the OPA Act is extended, price ceilings will also automatically be discontinued on June 30. The first day of July 1946, is thus the date, as our laws stand at present, when the Government's authority to pay dairy subsidies and to impose price ceilings will end.

Producers and processors, however, have their own ideas of when the wartime measures should be terminated. Their recommendations range from immediate discontinuance to the date set by law of July 1. There are those who recommend that the subsidy should be converted into price ceilings for the various products and that the subsidies should then be removed. Still others have suggested that dairy feed payments should be transformed into support prices to be continued indefinitely. As you can see, the range of recommendations is wide and somewhat contradictory.

But whatever the differences of opinion as to methods and timing, two main principles are generally acceptable to everyone. The first is that if price ceilings are removed, then subsidies should be removed at the same time. The second is the reverse of the first. If present ceiling prices are retained, then subsidy payments likewise must continue.

The real concern of producers is the level of returns after both ceilings and subsidies are removed. The removal of ceilings does not guarantee a floor. The Government's responsibility for price support still remains. This leaves the simple conclusion that any announcement from the Government terminating subsidies will need to be accompanied by a simultaneous announcement relative to a price support program.

The question of the levels at which prices will be supported also remains. More important, the level at which market prices may go above support levels is an open question. I'm not going to attempt to answer those today. But I do want to review with you some of the basic supply and demand considerations. These point toward relatively favorable prices for dairymen. All the milk we can produce should be absorbed at prices well above the legal minium support level. And there certainly would be no chance of meeting our production requirements if prices fell to this level. There is not a single item in the picture for next year indicating lower milk production costs.

Here are some of the supply and demand highlights.

The prospect is for somewhat lower milk production next year — perhaps off 2 or 3 compared with this year's record of 123.4 billion pounds. We will have fewer cows, and we can't count on a repetition of outstanding pasture conditions.

A goal of 120.5 billion pounds of milk has been announced for 1946. This is roughly the same as the estimated production next year and equal to the 1945 goal. But there is this big difference. The 1945 goal included milk to meet huge military and lend-lease requirements. We must think of the goal next year largely in terms of the domestic market.

How much is 120.5 billion pounds of milk? One measure is in terms of population. Taking the good years with the bad, the per capita production of milk has averaged 820 pounds over the past 20 years. If this average is applied to the estimated population for 1946, we would require about 116 billion pounds of milk. Or stated in another way, based on long-time averages, milk production could have been expected to reach 116 billion pounds by 1946 even if there had been no war to stimulate production. Apparently we are

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only 4 or 5 billion pounds ahead of schedule. And we will have continued export and military requirements.

An expanded population is not the only strengthening factor. Fortunately for the diary industry, consumer incomes are expected to continue at a high level. National income is expected to dip no more than 15 per cent in 1946. That means that consumers will be able to buy unrestricted quantities of all dairy products with the largest income that they have ever been able to use for that purpose. We can reasonably expect, therefore, that consumer spending for milk and milk products will increase in 1946. But can the additional buying account for the additional milk supply that will be available next year? It is a good question to ask, but a difficult question to answer. Before it is answered in full, you may be sure that the industry will undergo more than a few trials and tribulations. The primary problem will develop from the necessity of diverting the milk away from the war-demanded products and into the pattern of civilian consumption. But, in general, the outlook is good.

Total consumption of fluid milk will probably increase slightly while fluid cream consumption should go up substantially. Ice cream sales are expected to increase, with the extent of the increase depending, of course, on the availability of sugar. Farm-separated cream sales are likely to remain about the same, but a slight decrease is anticipated in the amount of milk used on farms or retailed by farmers.

Some additional whole milk is expected to be available for butter. This will raise 1946 butter production over 1945, but the increase may not bring production anywhere near to prewar levels.

Only evaporated milk, dry whole milk, dry ice cream mix, and cheese are expected to use less milk than in 1945.

We can count on an especially acute condition in the handling of skim milk next year. This may present our most acute price problem. Nonfat dry milk solids was one of the leading dairy products consigned for overseas use during the war. Production has more than doubled since the late prewar years, and the expanded output was used largely to meet lend-lease and military needs. Now we are confronted with the task of finding domestic markets for the larger production. The problem will be aggravated in no small degree by the additional skim we can expect from the increased production of butter from whole milk and the larger sales of fluid cream in 1946.

Increased use of skim in casein can be expected. Exportation of nonfat powder will be continued, but the volume may very well be reduced from the peak consignments of the war years. The marketing of our skim milk is, therefore, certain to be a critical problem during May and June. Even at best, careful planning will be needed to prevent sluggish and glutted markets.

The distribution of fluid milk presents a contrasting condition. It is generally agreed that the fluid milk industry had relatively less wartime restrictions than other branches of the industry. It expanded its civilian markets during the war, while butter, cheese, evaporated milk, and some other manufactured dairy products have to rebuild markets to regain prewar volume. This situation, plus the fact that fluid milk now represents the highest utilization of milk, in my opinion, places a heavier responsibility on the fluid milk industry than at any time in the past.

Its job is to maintain and expand markets — not to rebuild them. With the war over, with military and lend-lease demands sharply reduced, and with interest centering on price-support pledges and price-support problems, all persons connected with the dairy industry — certainly those of us in Government concerned with dairy problems — are anxious that nothing stand in the way of the highest possible use of whole milk, cream, and skim milk for fluid purposes. More sales and consumption in fluid form mean not only more money to producers and better health and nutrition among consumers, but also less troublesome surpluses to be handled by such products as evaporated milk, cheese, and milk powder. In the longer run, even the butter groups are worried about surpluses. The statement has been made many times and it is still a sound conclusion, that one of the strongest assets the dairy industry and dairy farmers could carry into the postwar period would be a higher level of fluid milk and fluid cream consumption. This, of course, does not mean that there should be any relaxation of effort to keep high consumption levels for manufactured products.

To carry out its responsibility, the fluid milk industry has a real obligation to reconvert its seasonal production pattern. This is the case in fluid milk markets particularly where the consumption does not vary greatly from month to month and where the milk cannot be stored in the spring months for consumption in other seasons. Fortunately, producers supplying fluid milk markets are in an enviable position at the present time. Fluid milk sales in all markets are considerably higher than they were in previous years, and there is every indication that heavy fluid sales will prevail next year. Fluid milk producers cannot expect to take full advantage of this market unless they also seriously undertake some responsibility in maintaining a balanced supply.

The seriousness of this problem was minimized during the war because the Government has required large quantities of manufactured dairy products and attempted to acquire its supplies during the flush seasons. But now the problem of restricting summer production and enlarging winter output must be met. The Government under Federal order programs has the responsibility of arranging and operating a program of regulation which assures a fluid milk market of an ade-

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quate supply of pure and wholesome milk. We are ready to do our part in this connection. However, producers in these markets must take the responsibility of making proposals and supporting them at public hearings so that the methods by which this shift is made does not result in a loss to producers.

Aside from the lower prices which producers can expect on an annual basis if this shift is not made, they must also consider the possibility of losing their market. Fluid milk producers can continue, of course, to depend on their handlers to obtain supplies from other sources during the short production season. They should also realize that the other suppliers will not continue to be willing to relinquish their markets during the flush season of production. Such a system, in any event, is exceedingly wasteful. It requires long and expensive hauls at one season of the year, and a contrasting waste of milk at other times. It could also result in burdening market pools with excessively large quantities of milk meeting expensive health requirements during the whole year so as to give assurance of an adequate supply for only a very short period.

Individual producers are not alone in their responsibility for supplying fluid milk markets with an adequate quantity of milk. In several of our markets during the current short period, milk was still being manufactured. We cannot consider that this is the fault of individual prducers. Perhaps the fault lies in the method of pricing in the Federal orders. Possibly it may be that we should review the effects of the equalization provisions of these orders. Are we losing one of the prime incentives necessary to induce all handlers to make their milk available for fluid milk consumption? Prior to market-wide equalization, we seldom heard of fluid milk being held back for manufacturing when a market was short of milk. Handlers usually were so anxious to gain and enlarge their outlets for fluid milk that price wars developed from time to time. In some areas, this aggressiveness to obtain fluid business appears to have subsided.

It is questions like these that require the full attention of the producer and producer organizations. Certainly dairy farmers cannot rest content with a system that encourages handlers to market milk in less valuable products. Fluid milk yields the highest return for producers. It, therefore, follows that producers are being directly penalized when a handler, offered a routine choice of a fluid or a non-fluid outlet, elects to ship in the nonfluid channel. The only possible justification for deliberately depressing producer income in that fashion can be found in the necessity of maintaining an open channel to a market that could absorb a substantial volume of milk in a surplus period. But even that is a poor excuse for denying fluid milk to a fluid market.

March of Dimes Accomplishment

Infantile paralysis is one of the most expensive diseases known to medicine. Not only must many victims of past epidemics receive continuing care, but each year's outbreaks add new names to the steadily growing list. Hospitalization for a single patient costs more than $2,500 a year. Some cases cost less, some much more, depending on the severity of the attack.

During the eight years of its existence the National Foundation for Infantile Paralysis, which conducts the March of Dimes, January 14-31, has disbursed over $8,000,000 for research and education, and over $2,000,000 for emergency aid in epidemics. Epidemic aid supplements the expenditures of local chapters. In 1945 alone, local chapters disbursed close to $3,000,000 for care and treatment of local poliomyelitis patients. One-half of all contributions to the annual March of Dimes remains with the chapters for this work.

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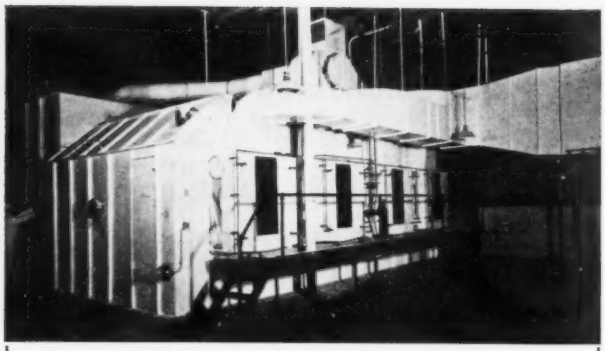

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R. J. Werner Succeeds S. H. Greene

California Dairy Council Appoints Released Army Officer as New General Manager

Richard J. Werner will take over the general managership of the California Dairy Council on February 1, according to an announcement December 12, by C. W. Hibbert, president. Werner's background of experience both in school administration and the dairy industry particularly fits him for this position, Hibbert said. He succeeds Sam H. Greene, general manager since the California Council was founded nearly 27 years ago. Greene has been elevated to the office of executive director for life.

Richard J. Werner

Werner, who served in the European theater of war, with rank of colonel, received his discharge a few weeks ago and resumed his position as president of Salinas Junior College at Salinas.

"The educational program of California Dairy Council and the opportunities for development of it are the factors which appeal to me," Werner said. "Aside from army interludes, my whole career has been a mixture of agriculture and education. I shall feel thoroughly at home and very happy."

Werner's is a typical American story—from ditch rider to Junior College president, army colonel and now executive in California's largest agricultural industry.

After graduating from Gardena High School, Los Angeles, he received his B.S. degree at Oregon State College, and his M.S. at the University of California College of Agriculture and recently topped this with an earned degree of Sc.D. from the University of Naples, Italy.

From his first job as ditch rider in the South San Joaquin Irrigation District at Manteca, Werner entered the army as private in World War I, was promoted to first lieutenant and spent twelve months overseas in France. When he returned he became principal of Esparto High School, Yolo County.

In 1923 Werner was made State Supervisor of Agricultural Education; in 1928 Commissioner of Secondary Education; 1929 Supervisor of Student Teaching at San Jose College.

The year 1933 saw his entry into the dairy industry as field manager for Golden State Company, Ltd., in charge of milk production and milk and cream purchases. He returned to the field of education in 1938 as president of Salinas Junior College, the position he is leaving now to become Dairy Council's general manager.

Time out for World War II as major in 1942 took him to Italy. As colonel, Infantry Executive Personnel Branch, 9th Service Command, Werner was made military governor of Naples Province in Italy, which included the Isle of Capri. Along with the colonel's eagles, Werner returned from overseas with seven battle stars from the European theatre for service at Salerno-Foggia, Rome-Arno, Normandy, Southern France, Central France, the Rhine and Central Germany. Honors from the United States government include a Bronze Star and Legion of Merit. He was recommended for decorations from France, Holland and Poland.

Work on Labor Program

The National Association of Manufacturers, meeting in New York December 5-7, in its Golden Anniversary Congress of American Industry, called for enactment of labor legislation necessary and appropriate to implement and effectuate the program of the management representatives to the recently-held President's Labor-Management Conference.

(Left to right: Lammot du Pont, Chairman of Board, E. I. du Pont de Nemours, Inc.; Theodore G. Montague, President, The Borden Company; R. Kirby Longino, President, Longino & Callin, Inc.; at the National Association of Manufacturers' Golden Anniversary, Congress of American Industry, held in New York early in December.

In a resolution fully endorsing the management program presented at the labor conference, the association gave recognition and acceptance to the "right of workers, when they so desire, to choose representatives for collective bargaining purposes," and specifically embraced parts of the program dealing with coercive and collusive labor practices, responsibility for adherence to collective bargaining agreements, equal treatment of labor and management under the law, and fact-finding panels. It was recommended that the fact-finding process "be limited to disputes vitally affecting public health or safety" and that Federally-authorized panels be used only in cases where a "threatened strike or lockout would directly extend beyond the borders of a State."

Visual Demonstration of Milk Value

Miss Helen Scott, biology instructor at Omaha South High School, is shown herewith telling her students that milk made the difference in growth of the two white rats held by two of the class members. Both rats were fed adequate diets with one exception—one was forced to drink coffee as his only liquid while the other thrived on milk.

Allen E. Cope of the Harding Cream Company is president of the Dairy Council of Omaha. Grace Roberts of the Graystone Dairy Company is vice-president. Otto Pfeiffer is treasurer and Carl Hansen is secretary. Both represent the Milk Producers Association. Miss Ardith Von Housen is director of the nutrition education program.

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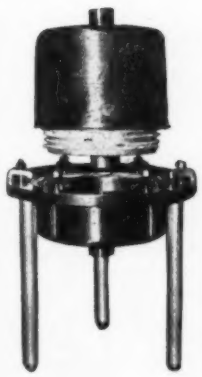

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Consideration on the Keeping Quality of Pasteurized Milk

Average Home Refrigeration Found Satisfactory in Maintaining Product Sweet for 7 Days and Good Flavor 4 Days or Longer

(By L. H. Burgwald and D. V. Josephson, Department of Dairy Technology, Ohio State University)

IN A STUDY made last summer at Ohio State University it was found that regular grades of pasteurized milk would stay sweet for seven to twenty-eight days under conditions which might normally be imposed upon it by the average consumer. The treatment the milk received and temperatures of the refrigerator were greater factors than the number of bacteria present in the milk at time tests were started. A total of 184 bottles of milk from eight different lots from five plants were tested.

Acidity of Milk

The milk was considered sour when it developed .03 per cent or more acidity. However, at this acidity milk would still be accepted and would not taste sour to the average person. Nevertheless, when this acidity is reached, the further acid development is accelerated to the point where it will be sour in less than 24 hours. Half-pint samples (80) from the eight lots of milk were placed in the refrigerator (under the cold unit) and held at an average temperature of 39.4 deg. F. (range 36-42 deg. F.). These samples stayed sweet for an average of 21.8 days (range 11-28 days). Half-pint samples (80) from the eight lots of milk were exposed to room temperature of 80-88 deg. F. for 30 minutes before being placed in the refrigerator on the side, away from the cold unit. The average temperature at time samples were placed in the refrigerator was 60.8 deg. F. They were held at an average temperature of 43.1 deg. F. (range 41-45 deg. F.) and remained sweet for an average of 15.6 days (range 7-21 days).

Three sets of quart bottles of milk were taken from each lot, one set (No. 1) was placed in the refrigerator immediately, one set (No. 2) was exposed to room temperature of 80-88 deg. F. for one hour, and the other set (No. 3) was exposed for two hours before being placed in the refrigerator. These samples were all placed on the side away from the cold unit. The average temperature at which set No. 1 was held was 43 deg. F. (range 41-45 deg. F.). The set remained sweet for 12.3 days (range 7-14 days). Set No. 2 had an average temperature of 61.5 deg. F. (range 50-68 deg. F.) at time they were placed in the refrigerator, and they were held at an average temperature of 43 deg. F. This set remained sweet for an average of 12.5 days (range 7-16 days). Set No. 3 had an average temperature of 43.1 deg. F. This set remained sweet for an average of 12.4 days (range 7-16 days).

The quart samples were removed from the refrigerator every day for a period of 5 to 7 minutes while tests were run. The temperature of the milk increased from 2 to 4 degrees during this time. This, undoubtedly, was the cause of the quart samples only remaining sweet for a fraction over 12 days while the half-pint samples held at the same temperature remained sweet for a fraction over 15 days. In the case of the half-pints, a fresh sample was used each day. By placing milk in the refrigerator immediately upon delivery and at a temperature below 40 deg. F. it remained sweet for an average of slightly over 20 days.

Effect of Initial Bacterial Count

The initial bacterial counts (standard agar plate) of the milk did not always indicate its potential keeping quality. One lot of samples having an initial bacterial count of 61,000 per ml. remained sweet for 25 days at temperatures below 40 deg. F. and for 21 days at a temperature about 40 deg. F. on the half-pints and for 13 to 15 days in the quarts. Another lot of samples held below 40 deg. F. and having an initial bacterial count of 7,150 per ml. remained sweet for only 16 days; the half-pints and quarts held above 40 deg. F. remained sweet for only 12 days.

Of the 8 lots of milk, 5 had initial bacterial counts of less than 25,000 per ml., while 3 lots of milk had counts over 50,000 per ml. The average length of time the low count milk stayed sweet was 21.2 days for the half-pints held at less than 40 deg. F. and 15.6 days for the half-pints held above 40 deg. F. The different sets of quarts remained sweet for 13, 13 and 12.8 days, respectively. The high count milk for the respective samples stayed sweet for 19 days, 15.7 days, 11 days, 11.7 days, and 11.7 days, indicating the initial count in these experiments had only slight effect on the whole.

Growth of Bacteria

There was no appreciable increase in the bacterial count up to 4 days in any

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of the samples. After 4 days, however, the psychrophilic (cold-loving) bacteria increased rapidly in numbers, and they were the ones which actually caused the milk to sour in practically all instances. Invariably, the psychrophilic count was over a hundred million at the time the milk soured.

Flavor of Product

There was no change noted in the flavor of any of the various lots of milk until they were from 4 to 17 days old. These changes were only slight and not objectionable and would not effect the acceptability of the product as a beverage. The half-pints held at temperatures under 40 deg. F. did not change in flavor for an average of 12.1 days (range 7-17 days). The half-pints held at temperatures above 40 deg. F. did not change in flavor for an average of 9.8 days (range 4-14 days). The quarts did not change for (Set No. 1) 8.6 days (range 4-12 days); (Set No. 2) 9.5 days (range 4-12 days); and (Set No. 3) for 8.9 days (range 4-12 days).

Vitamin C

The Vitamin C content of the fresh milk varied greatly; in the different lots of milk; it ranged from 5.1 mg. per liter to 15.1 mg. per liter. The average was 10.5 mg. per liter in the fresh milk which had not been unduly exposed to light or room temperature. When it has been exposed it had been even lower. The quarts exposed for two hours at room temperature contained 8.5 mg. per liter after exposure. The Vitamin C had practically disappeared in four lots even when not exposed when two days old. These four lots only had an average of 7.4 mg. per liter in the fresh milk; and when two days old only 0.6 mg. per liter remained. The milk in these lots must undoubtedly have been contaminated with traces of iron or copper or both from milk cans or plant equipment. The milk from the other four lots not exposed had an average of 13.7 mg. of Vitamin C per liter in the fresh milk, and when two days old had 9.7 mg., and when four days old still had 6.4 mg. per liter.

Riboflavin

The riboflavin content of all lots of milk was practically the same in every instance ranging from 1.50 to 1.68 micrograms per ml. with an average of 1.57 micrograms per ml. Practically none was lost during the entire storage period of any of the samples. The average riboflavin content at the time the samples were considered sour was 1.55 micrograms per ml. The range was from 1.48 to 1.68 micrograms per ml. The average for the quart samples only which had been exposed to room temperature for two hours was 1.54 micrograms per ml.

Conclusions

The study indicates that with the average refrigeration in the home today, no difficulty should be experienced in keeping milk sweet for seven days and of good flavor for four days or longer, even during the hot summer months. Refrigeration temperatures should be below 45 deg. F. and preferably down to 40 deg. F.

THATCHER DIVIDEND

At the last regular monthly meeting of the board of directors of the Thatcher Manufacturing Company in Elmira, N. Y., the directors declared the 121st consecutive quarterly dividend of 90c per share on the convertible preference stock payable February 15, 1946, to convertible preference stockholders of record January 31, 1946.

A dividend was also declared upon the common stock of the corporation, payable in common stock, at the rate of one share for each twenty shares outstanding of record at the close of business on December 28, 1945, payable January 21, 1946, or as soon thereafter as may be practicable. Fractional shares will not be issued but script certificates will be issued in lieu thereof.

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Sees Possible Shortage

Cornell University Economist Visualizes Possibility of Severe Pinch in Milk Supply Next Fall

Ithaca, N. Y.—Possibilities of a milk shortage next fall within the framework of the New York Metropolitan Market are foreseen by a Cornell University professor. If the use of fluid milk increases as it has this year, and cream sales are equal to pre-war, at least 10 per cent more milk supplies will be needed, declared Prof. L. C. Cunningham of the agricultural economics department.

"This will be the amount required to protect the market against the importation of cream from unapproved sources."

Cunningham pointed out that November was the first month during 1945 to show a drop in milk production compared with the previous year. Various reasons have been given, among them the lower quality of hay grown this summer. Milk per cow decreased in November and December over the same period a year ago.

Total number of cows in the state was slightly higher this year than last, he said. Nevertheless, "total milk production in 1946 is not likely to be as high as this year because we cannot count on another unusually favorable pasture season.

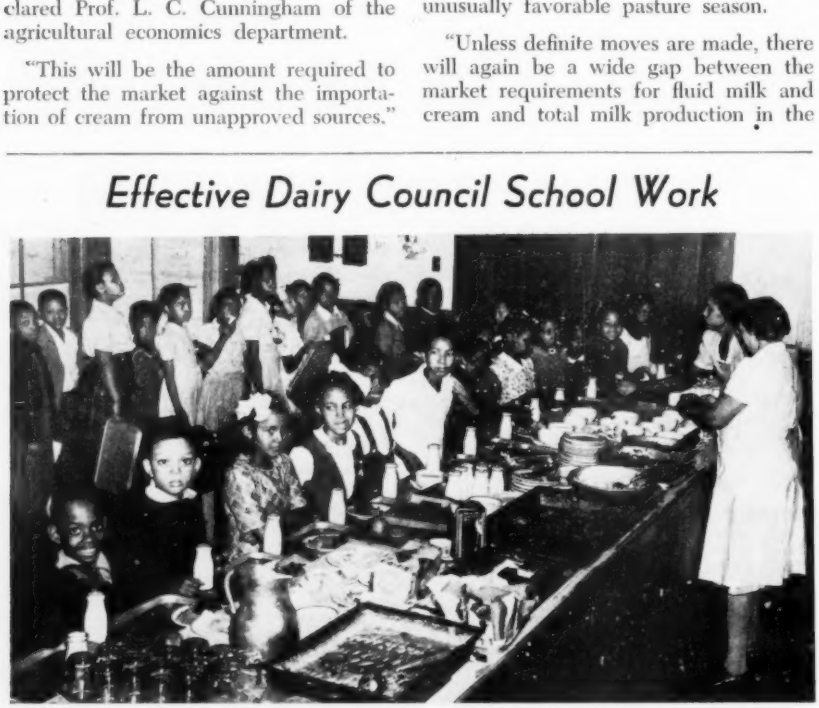
"Unless definite moves are made, there will again be a wide gap between the market requirements for fluid milk and cream and total milk production in the fall of 1946," continued Prof. Cunningham.

"The November farm price of milk in per cent of the average price for the year has been declining irregularly since 1937. The May-June average price, on the other hand, has been increasing. Much of the incentive to produce more milk in the fall months has therefore been removed," the farm management professor stated.

He added: "An even wider Class I milk price differential than the proposed 40 cents between summer and winter may be necessary to check the trend away from fall output."

As a member of the college dairy commodity committee at Cornell, Dr. Cunningham urged dairymen to adjust their breeding practices to have more cows freshen in the months of August, September, and October during the next few years. Feeding practices for the fall of 1946 should also be planned to produce as much milk as possible in November and December, he said.

Effective Dairy Council School Work



Sixth grade children of Washington Primary School, Greensboro, N. C., are shown here selecting a well balanced lunch in their school cafeteria. These boys and girls have just completed a rat-feeding experiment, and the lesson learned is demonstrated by the bottle of milk seen on each tray.

Henry C. Liles of the Pet Dairy Company, Greensboro, is President of the Greensboro High-Point Dairy Council. Sloan Gibson of the Gibson Ice Cream Company in High-Point is Vice-President. Mose Kiser of the Guilford Dairy Cooperative in Greensboro is Secretary and J. R. Willis of Clover Brand Dairies in High-Point is Treasurer. Miss Jane Umstead is Director of the health education program of the organization.

ABBOTTS BOND SALES

The fact that the war is over did not lessen the aggressiveness of the Abbotts Dairies organization in Philadelphia. During the recent Victory Bond Drive, the men and women of this dairy company sold $4,730,460.00 worth of bonds to bring to a close their most successful campaign.

At a dinner on December 18th, prize bonds were awarded to twenty-five men and women who had the highest records of sales in the contest sponsored by the company. Other guests at the dinner included 225 members whose ticket of admission was $1,000 or more in bond sales.

G. G. Diffenback, chairman of the drive, paid tribute to the fourteen Abbotts men who died in service and rendered grateful thanks to 545 others who fought in battles on all fronts.

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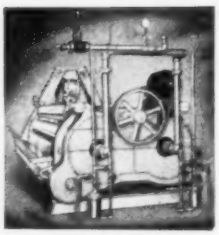

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Wants Subsidy Continued

N. Y. State Farm Bureau Official Seeks Its Maintenance Until Industrial Labor-Management Strife Ceases

Chicago, Ill.—The opinion that "the milk subsidy will have to be continued until labor and industrial management settle their differences and get down to business and turn out the goods so that consumer income may support a high enough price for fluid milk to make possible the abolition of the subsidy" was expressed here recently by a spokesman for the 76,000-member New York State Farm Bureau Federation.

Don J. Wickham, Hector, N. Y., vice-president, stated this view on behalf of the organization's membership in a summary of New York farm problems which he presented in a forum session at the American Farm Bureau Federation's 27th annual meeting in the Hotel Sherman.

"More than one-half of all of the farm income in New York State comes from the dairy cow," Mr. Wickham said in his prepared talk. "Under the present scheme of things, one-quarter of the return to farmers in our State for fluid milk comes from the Federal treasury in the form of subsidy.

"We never asked for subsidy. On the contrary, we opposed subsidy and asked for a fair price in the market place sufficient to meet rising costs of production and sufficient to stimulate all-out production for war purposes. What did we get? We got an unfair price plus a Government subsidy. The combination of the two has given our milk producers a fair return. What lies around the corner is now the important question of the day.

"We still oppose the subsidy in principle," Mr. Wickham continued. "However, if the subsidy is now abolished and if price control continues to prevent a fair market price to the producer to replace the subsidy payment, the New York farmers will be severely injured. The cost of making milk is now the highest in the history of the State.

"In our opinion, it will be politically impossible to replace the milk subsidy with higher prices for milk as long as widespread strikes exist among industrial workers, for such strikes are bound to lower consumer income."

Declaring that "it was Government—not the farmer—that got us into this subsidy program," Mr. Wickham concluded, "it is now the job of Government to get us out of the subsidy program without reducing income to dairy farmers."

PA. DAIRYMEN TO MEET

The Pennsylvania Dairymen's Association will hold its annual banquet at the Penn Harris Hotel in Harrisburg January 23, in connection with the annual meeting of the Dairymen's Association scheduled for the following day.

Frank E. Snyder, president of the Metropolitan Cooperative Milk Producers Bargaining Agency, will act as toastmaster at the banquet and the guest speaker will be Dr. Roger Corbett, secretary of the American Farm Bureau Federation.

On the morning program January 24, there will be talks on "Improving the Dairy Herd by Breeding," by M. H. Fohrman of the USDA Bureau of Dairying, and "The Economic Conditions Facing Pennsylvania Dairymen," by Dr. G. W. Hedlund, head of the Department of Agricultural Economics at Pennsylvania State College.

Speakers at the afternoon session include Walter S. Anderson, director of Pennsylvania Bureau of Milk Sanitation; Frank Bushek, who will give a talk on the work of the American Dairy Association, and a talk on "Recent Advances in Our Knowledge of Mastitis," by Dr. J. J. Reid, dairy bacteriologist at Pennsylvania State College.

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Air Conditioning

Successful Methods that May Be Profitably Employed to Avoid Wet Cold Dairy Barns

Dairy stable "air conditioning" can be accomplished with proper air flues and wall insulation, and will keep barns dry at a temperature of about 50 degrees F. Ray Bender of Westport, N. Y., Essex County agricultural agent, declared in a General Electric Farm Paper of the Air address over WGY in Schenectady.

Mr. Bender mentioned two barns that were improved by an Essex County farmer, Wallace Johnson of Ticonderoga. Mr. Johnson, a dairyman for 25 years, described his successful methods for avoiding wet, cold barns. He said, "We had a lot of moisture condensing on the side walls and running down in the feed alleys. We also discovered that the sills and studding had started to rot in one corner and had to be replaced."

Therefore, Mr. Johnson built an outtake flue, intake flues, put on some double windows and installed insulation in the walls.

"Nothing has to be regulated at the present time to maintain a temperature of 40 to 50 degrees, until the outside temperature goes down to 10 degrees below zero," he explained. "We don't pay any attention to the wind, and the barn is not drafty and no longer wet."

Description of Barn

Describing his barn and the position of the flues, he said: "The barn is T shaped. The main cow barn stanchions 73 cows and has a horse barn for six horses at one end. It is 200 feet long. The calf barn comes off the middle of one side with a bull barn at one end of it. This calf barn ties up 33 heifers in a single row, and it has 15 large pens for cows or calves and six smaller pens. The bull barn houses five bulls. The calf barn is about 120 feet long.

"We built one outtake flue between the calf barn and cow barn. The flue is four feet by six feet, inside dimensions. It starts at the floor and goes up to two feet higher than the ridge. Then we have intake flues scattered all around the side walls. They are 60 square inches in area, and we have one for every 3½ mature cows. We took care to distribute them evenly along the side walls.

"For the intakes, we used one-inch matched lumber nailed right against a layer of one-half inch Celotex. For the outlet flue we used 13/16 inch Celotex and lumber over it.

"The bull barn and horse barn are ventilated by the same system, one large outtake flue taking care of these needs. There is one intake coming into the horse barn from outside. Then, air is taken from the horse barn into the cow barn. Steam pours out of the flue like white smoke.

"For the weather colder than 10 deg. below zero, each intake flue has a hinged cover on the inside that we close except for one inch. We let the outtake flue alone. The hay hopes are kept closed."

TENTATIVE APPROVAL

USDA Prepares Milk Marketing Order for the Columbus Area

Washington, D. C.—To effect more equitable returns to milk producers supplying the Columbus, Ohio, marketing area, the U. S. Department of Agriculture has tentatively approved a marketing agreement regulating milk handling in that area. Approval follows receipt by the Department of exceptions by area producers and handlers to a report issued by the Department based on recent hearings. At present the Columbus area has no milk marketing agreement and order.

An order for the area, containing provisions identical with those in the marketing agreement, will become effective provided two-thirds or more of the producers supplying the market approve it.

Major provisions of the proposed agreement and order follow:

Set up four milk classes. Class I milk would include fluid milk, skim milk, flavored milk, milk drinks, buttermilk and plant shrinkage in excess of 2½ per cent. Class II milk would include sweet and sour cream, cream products in fluid form containing less than the minimum butterfat content required for fluid cream, and cottage cheese. Class III milk would include ice cream, ice cream mix, ice cream novelties and sherberts, condensed milk and condensed skim milk (except in heremetically sealed cans). Class IV milk would be comprised of products other than those in other classes and of plant shrinkage up to 2½ per cent of milk received by handlers.

Establish class prices by formulas based either on the average price of milk paid by specified evaporated milk plants or on the combined market prices of butter and nonfat dry milk solids. Prices for Classes I, II, and III milk would rise or fall in units of 25 cents a hundredweight in accord with the rise or fall of the value of the products as used in the basic formulas. On the basis of four per cent butterfat milk, the prices which the order would establish at the present time are, per hundredweight: Class I, $3.50. Class II, $3.25. Class III, $3.10. Class IV, $2.95 (approx.).

Distribute producer returns by means of a market-wide "pool".

NEW RALEIGH FIRM

Maola Milk & Ice Cream Company, with main offices at New Bern, N. C., has received a charter from the Secretary of State to buy and sell dairy products under authorized capital of $500,000.

Subscribing to the capital stock were the incorporators, Harvey L. Barnes, Sr., Helen K. Barnes and Harvey L. Barnes, Jr., all of New Bern.

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Illinois Assn. Officers

L. H. Barrett Elected to Succeed H. E. Strong — W. R. Lloyd, Vice-President — M. G. Van Buskirk Re-elected

Chicago, Ill.–L. H. Barrett, Hydrox Corporation, Chicago, was elected president of the Illinois Dairy Products Association, succeeding H. E. Strong, DuQuoin, at the annual meeting of the Board of Directors at the convention here December 12th. W. R. Lloyd, Benson Creamery, Decatur, was elected vice-president and M. G. Van Buskirk, Chicago, was re-elected secretary-treasurer. Chicago was chosen for the1946 convention.

Officers of the commodity groups elected were:

Illinois Association of Ice Cream Manufacturers–President, Vinton Thompson, Rockford; Vice-President, T. M. Damgard, Streator; Directors–J. J. Beeby, Alton; C. L. Clarke, Elgin; E. W. Credicott, Freeport; I. A. Madden, Springfield; H. Soldwedel, Canton; D. L. Huxtable, Champaign; Director I. D. P. A.–J. J. Beeby, Alton.

Illinois Butter Manufacturers Improvement Association – President, George O'Donnell, Olney; Vice-President, A. J. Enloe, Rushville; Directors – H. A. Ernster, Chicago; C. T. Cline, Peoria; Directors I. D. P. A.–W. C. Milholland, Terre Haute, Indiana; H. J. Credicott, Freeport; Cream Grading Committee–H. C. Shapley, Danville; Leland Krebs, Quincy; Rex Stevens, Terre Haute, Indiana; Earl Starr, Carlinville; Labor Committee–Joe Post, Chicago, chairman; C. C. Johnson, Chicago; C. T. Cline, Peoria.

Illinois Ice Cream Mix Manufacturers and Distributors Association– President, V. A. Berghoefer, River Forest; Directors –W. H. Brazelton, Normal; J. R. Steinwart, Sandwich; Director I. D. P. A.–W. H. Brazelton, Normal.

Illinois Milk Dealers Association–President, C. M. Holmes, Champaign; Directors–L. W. Roszell, Peoria; J. R. Downing, Rock Island; C. F. Kaiser, Freeport; Director I. D. P. A.–Hugh Powell, Rockford.

Illinois Cheese Manufacturers Association–President, Milton Kinnate, Forrest; Vice-President, Vernon Oetkin, Aledo; Directors–Kinnate and Oetkin; Director I. D. P. A.–C. E. Zuercher, Chicago.

M. C. Van Buskirk, Chicago, was elected secretary of each of the commodity groups. Directors are elected for a two-year term. Ed. McCormick, S. H. Mahoney Extract Company, Chicago, was elected president of the Booster organization.

EX-CELL-O ANNOUNCEMENT

J. W. Radke to Represent Pure-Pak Division in the South

Joseph W. Radke, four years with Ex-Cello-O Corporation, has been appointed representative for Pure-Pak Division in the Southern territory. With headquarters in Atlanta, Georgia, Mr.

Joseph W. Radke

Radke will contact milk plants in the block of states from the Southeastern seaboard through Texas and North through Tennessee.

Since 1942, Mr. Radke has been in charge of the credit department of Ex-Cell-O Corporation, Detroit, until his recent promotion to his new position with Pure-Pak Division.

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Milk Price at $3.61

Record Low in Farm Production Has Channeled Nearly All Milk in Fluid Categories

With virtually all their production marketed as fluid milk and cream, dairy farmers of the New York milkshed received for their November output the highest price ever returned from the Metropolitan milk pool. The price, posted by Dr. C. J. Blanford, administrator of the New York Metropolitan milk marketing area, was $3.61 a hundredweight. Dairy production payments from the U. S. Department fo Agriculture, added at the lesser of the 70- and 80-cent rates collectible in the New York milkshed, brought the total rate of return of $4.31.

Dr. Blanford pointed out the November pool price of $3.61 is equivalent to nearly $3.65 under the system of paying New York pool producers for butterfat prior to August 1. The adjusted total return of $4.35 thus exceeds last year's November total when a 10-cent lower pool price was enlarged by a 10-cent higher USDA payment to bring producers $4.31 a hundredweight.

The administrator's pool report showed that, in spite of the record rate of return, farm income from November milkings, to be shared among 48,481 dairy farmers, will fall below last year's yield of $16,600,640.74 from pool and USDA payments. The current combined yield will amount to $14,926,873.22 for a decrease of $1,673,767.52.

Lessened Flow Recorded

The reduction in farm income is the direct result of the lesser volume of milk dairy farmers delivered last month. Their output amounted to 328,536,722 pounds of milk and is the record low for deliveries to New York approved plants. The decrease from last year's intake of 370,346,363 pounds comes to 11 per cent. The previous low, also recorded in November, occurred in 1943 when the pool contained 338 million pounds. Beginning with 1938, when dairy farmers delivered 350 million pounds, the November intake at pool plants has ranged up to a high of 415 million pounds in 1941.

Dr. Blanford attributed the record-low intake to a combination of (1), fewer producers in the New York pool and (2), the trend toward lesser production in winter months. The November pool represents the output of less than 48,500 farms. In previous Novembers, as many as nearly 60,500 farmers have been accredited to the pool. The 1941 peak, consisting of the milkings of 58,447 producers, was handled through 482 country plants, while the current November flow from 10,000 fewer farms was marketed through 438 plants. The loss in plants as well as producers, according to the administrator's records, indicates that producers formerly supplying the New York market are now delivering for sale in other areas.

Blandford's Analysis of Picture

"The trend toward lesser production," Dr. Blanford reported, "has been revealed in the last few years. It has been accompanied by a converse trend toward higher flush production in the spring months. The result has been that the New York pool over the past three years or so has been found increasingly short of adequate supplies in November. The November marketings reveal the continuing result of the converse trends."

Illustrating the result, the administrator pointed out that 97 per cent of the pool was marketed this November as fluid milk and cream. The balance, amounting to actually less than three per cent of the milk, was consigned to the manufacture of a few products. Handler reports revealed, in fact, that not a single pound of New York pool milk was manufactured into evaporated milk or cheddar cheese in that month. Only 117,000 pounds of milk, equivalent to three hundredths of one per cent of the total intake, was churned into butter with a probable yield of 6,000 pounds. Butter production from pool milk fell off 99 per cent from November, 1944.

The New York market, comprising New York City and Westchester, took 243,943,545 pounds of milk for fluid use. The sales represented 74 per cent of the pool. Fluid sales to other urban markets in the East, mainly in Northern New Jersey, accounted for 48,652,663 pounds for nearly 15 per cent of the pool.

"Sales to other fluid markets," Dr. Blanford reported, "represented the second largest outlet for New York milkshed production. Those sales, in fact, jumped 24 per cent above last year's consignments in the same period. The increase indicates that the other markets are increasingly dependent on New York supplies to cover their short season requirements and are suffering from the same seasonal trends toward lower winter and higher summer production."

DR. E. H. BANCROFT DIES

Barre, Vt.—Dr. Ernest Harrison Bancroft, 65, of South Barre, president of New England Dairies, died at his home here December 17 after an illness of about a week.

Dr. Bancroft was born in Barre Town October 4, 1880, and graduated from Chicago Veterinary College in 1911. Before becoming head of New England Dairies, an office held for many years, he was a veterinarian and general manager of Granite City Co-operative Creamery. He was also a member of the state board of veterinary registration and examination and chairman of the New England Dairy Conference Board.

NAT'L DAIRY EXPANDS PLANT

Charleroi, Pa.—A new $200,000 plant to replace the present facilities at First St. and McKean Ave. will be built by Reick-McJunkin Dairy Company, a subsidiary of National Dairy.

MARWYN
DAIRY PRODUCTS

Sweet Cream
Frozen Cream
Plastic Cream

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"STURDY-BILT"
Soaker-Type
BOTTLE WASHER
STURDY-BILT EQUIPMENT CORP.
Menomonee Falls, Wisconsin

HOLM APPOINTED SECRETARY

Recently Discharged Veteran Assumes Post with Columbus Distributors

Ward K. Holm, recently discharged navy lieutenant, has been appointed executive secretary of the Columbus Milk Distributors Association, it was announced today by W. A. Roffey, president of the group.

He will take over the duties of R. B. Stoltz, professor of dairy technology at Ohio State University, who has held the secretarial position for a number of years. At a recent meeting held in Professor Stoltz's honor it was pointed out that the work had increased in scope to the point where it could no longer be handled on a part-time basis. Professor Stoltz was elected a lifetime member of the board of trustees and named the technical advisor of the group, in recognition of his services.

Ward K. Holm

Holm is a graduate of Ohio State University where he received his Bachelor of Science degree in dairy technology in 1942. At the University he was president of the student affiliate of the American Dairy Science Association. Soon after graduation he entered the navy as a seaman first class and was discharged after 45 months of service, 32 of which were spent in the Pacific.

The Columbus Milk Distributors Association is an organization which represents all the fluid milk distributors in the Columbus market.

NORTH DAKOTA CONFERENCE

Fargo, N. D.—In a late letter to the "Review" Associate Professor C. Jensen of the Dairy Husbandry Department announces that the North Dakota annual Dairy Plant Operators' Conference will be held from February 11 to 14, inclusive, at the North Dakota Agricultural College here.

Important problems dealing with butter, ice cream and market milk will be discussed. The regular college staff members will be assisted by outside speakers of national authority on their respective subjects. Practical as well as theoretical instruction will be given in all courses.

For further information write to C. Jensen, Department of Dairy Husbandry, North Dakota Agricultural College, Fargo, North Dakota.

SET OREGON CONVENTION

Corvallis, Ore.—R. E. Stout, acting secretary, has announced that at a recent meeting of the Executive Committee of the Oregon Dairy Manufacturers' Association, it was decided that the 35th Annual Convention would be held at Oregon State College, Corvallis, February 19 and 20. This will be the first meeting held at Corvallis since 1942. During 1943, 1944, and 1945 streamlined one-day sessions were held in Portland.

"The program which is now being drawn up by the program committee," Mr. Stout stated, "will cover in general new developments and post-war problems in the manufacturing and merchandizing of butter, cheese, market milk, and ice cream. Arrangements are now being made to secure several out-of-state specialists to appear on the program. The usual dairy products contests will be held in conjunction with the convention.

Officers of the Oregon group are: President, N. A. Peters, Portland; Vice-President, Ed. L. Reeser, Albany; Treasurer, F. F. Moser, Corvallis; Secretary, G. H. Wilster, Oregon State College, Corvallis.

25 YEARS SUCCESSFUL MANUFACTURING EXPERIENCE
Built to endure
For more than 25 years Superior craftsmen have produced dairyware.
Through long experience Superior men have come to look upon their work in the traditional craft spirit — a spirit that derives genuine satisfaction from work well done — a spirit that welcomes the challenge of time which proves that Superior dairyware is built to endure.
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You Can *Rustproof* 25 MILK CANS-

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ELECTRO **E-P** PLATER

BUTTONS

One button to a can is all it takes! Sorensen's E-P (Electro-Plater) Buttons rescue your rusty cans and rustproof your new cans, while they are in use. The lactic acid in milk or cream sets up the electro-plating action of E-P Buttons which replates rust spots in old cans, prevents rust in new cans. 22c a can protects your cans from rust, adding many months or even years to their life. Proven by years of success—thousands in daily use. Positively no taints or off flavors. Order E-P Buttons to-day for ALL your cans—use coupon below.

TYPICAL USERS

Sanitary Farm Dairies, Cedar Rapids, Iowa.
Alamito Dairy, Omaha, Nebr.
Knudsen Creamery Co., Los Angeles, Calif.
Boyden Farmers Creamery, Boyden Iowa.
Lyon County Cry., Tracy, Minn.
Ithaca Dairy Prod. Co., Ithaca, N. Y.
General Ice Cream Corp., Schenectady, N. Y.
Frank Pilley and Sons, Omaha, Nebr.
Northland Milk & Ice Cream Co. Minneapolis, Minn.
Bowman Dairy Co., Chicago, Ill.
Meriden Creamery, Hutchinson, Kans.
Twin City Milk Producers, St. Paul, Minn.
Turtle Lake Co-op. Cry., Turtle Lake, Wis.

PUT BUTTON INSIDE COVER

Where cans are agitated on milk route service, users are reporting excellent results by putting button inside the cover, instead of on bottom of can as illustrated.

CROMATIN

Adds years to life of Vats and Tanks

CROMATIN (Sorensen's RETIN) is 3 TIMES HARDER than ordinary tin. Comes in powder form—just mix with water and brush on like paint, then heat with blow torch. Makes a smooth hard coating guaranteed for five years. Does not corrode! Stainless! Flavor of vat contents not affected. One pint can will usually resurface the area of a 200 gallon tank.

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☐ Send ..... boxes Sorensen's E-P Buttons (25 buttons) @ $5.50 per box.

☐ Check or Money Order enclosed. ☐ Send C.O.D. ☐ Bill us 2% —10 days.

Name of Firm .....

Authorized Signature .....

Address .....

Jewish Charities Drive

Milk and Ice Cream Division of the Industry Gets Set for Annual Federation Campaign

Setting the pace for a drive that will cover the entire industry, the Milk and Ice Cream Division of the Federation of Jewish Philanthropies of New York opened its campaign in support of the Federation's current $30,000,000 campaign with a recent dinner at the Grand Street Boys Club, 106 West 55th St.

The event set new division marks for attendance and volume of pledges, it was announced by Joseph L. Greenberg and Samuel Goldberg, the group's co-chairman.

Charles Margett, associate chairman of the Federation's Queens Division and a former president of its Queens Lawyers Club, spoke on the aims of the campaign. He said that the Federation is seeking a $21,000,000 building fund, in addition to $9,000,000 for 1945-46 maintenance needs, and urged the trade to support both goals because "one cannot succeed without the other." The building fund will be used, he added, to further research, and to expand and modernize 116 Federation-affiliated hospitals, health and welfare agencies now serving more than 300,000 persons a year.

Associate chairman of the dinner committee that sponsored the event included Max Doner, Alex Eisenberg, Isidore Eisenstein, Daniel Kotcher, Daniel Liberman and Samuel Miller.

Members of the trade-wide executive committee are: Morris Abler, Samuel Adler, Phil Alpert, Abraham Bagden, Harry Bagden, Fred Beers, Joseph Blum, Julius Cohen, Isidore Cohn, Morris Cohn, Samuel Doner, Percy Fabian, Joseph From, Meyer Ginsberg, Benjamin Greenberg, Irving Grossman, Ezra Kotcher, Irwin Kotcher, Jacob Kotcher and Abram Kroll.

Also, Isidore Landau, Max Levy, William Levy, Morris Lindauer, Hyman Rubel, Aaron H. Rubenfeld, Max Sacks, Nathan Sacks, Max Schwartz, Ben L. Simon, Jack Silverstein, Louis Tolins and Joe Weissglass.

Lunch Manager Creates Exhibit

An interesting display of Milk Foundation materials arranged by Miss Nordquist, lunch room manager of the Austin High School in Chicago for the PTA unit. Miss Nordquist originated this activity which is indicative of the broad coverage milk and dairy products are getting in the Chicago area resulting from the Milk Foundation education program. CFD.

Sidney Wanzer of the Wanzer Dairy in Chicago is President of the Milk Foundation which is an affiliated unit of the National Dairy Council. Carl Deysenroth is General Manager.

CLASSIFIED ADVERTISING

RATES: "Position Wanted." 50c. Limit of 50 words; 2c for each additional word. All other advertisements, 5c a word ($1.00 minimum). Keyed ads, 15c extra to cover return postage. The name and address should be included in counting the words.

All payments strictly in advance.

POSITION WANTED

MILK PLANT operator, pasteurizer chemist. Veteran, age 28, married. Last position prior to army service was assistast production foreman. Seeking work in plant located within commuting distance of New York City. Box 200, care this publication. 1-M

I WOULD LIKE to hear from a reliable firm which would be interested in employing a man with top experience in the cheese industry, such as buying, selling, manufacturing or field work. I am 36 years old and for the past 15 years have successfully owned and operated my own cheese plants. I can give the best of character or business references. Box 205, care this publication. 1-M

WANTED — To contact a dairy plant needing a plant man with 20 years of experience covering all branches of dairy products manufacture and plant operation. Am employed as foreman in a large city milk plant. An interview is desirable and a change can be effected on reasonable notice. Age 40, excellent references. Box 203, care this publication. 1-M

HELP WANTED

WANTED—Cheese maker thoroughly familiar with the manufacture of Cheddar cheese and also soft cheese, if possible. Excellent opportunity, give full details. Box 202, care this publication. 1-M

PARTNER WANTED

DAIRY PLANT handling 2,500 to 3,000 quarts pasteurized milk daily wants man to handle plant end; preferably as partner with small investment. Must be experienced all around plant worker and handle maintenance. Located central Jersey, on farm. Box 198, care this publication. 1-M-2

EQUIPMENT WANTED

WANTED TO BUY—Used direct connected motor driven churn, with capacity from 100 to 300 pounds of butter per churning. Address Box 195, care this publication. 1-M

EQUIPMENT WANTED

WANTED — A good used Viscolizer or homogenizer. Give size, make, price and condition in first letter. Box 199, care this publication. 1-M

SELLING SERVICES

FIFTY-TWO good Ads boosting consumption of bottled milk, $2.00. Neatly printed cards and stationery. Sim's Service, Saline 1, Mich. 1-M-2

CREAMERY FOR SALE

WESTERN MONTANA Creamery—$15,000 buys partnership creamery and truck routes. Producing 150,000 lbs. Butter in prints annually. Also wholesale Cottage cheese, Cultured Buttermilk and bottled sweet Cream; opening for more dairy products. Box 204, care this publication. 1-M

DAIRY FOR SALE

FIVE ACRES land all in corral; large creamery, capacity 5,000 gallons; large dwelling; two routes; truck, cases, bottles; barn for 60 cows; two large silos; large office; 90 cows, 1 bull. Mrs. Bernadine Creton, Blue Bird Dairy, Rt. 5, Box 356, Riverside, Cal. 1-M

MILK PLANT FOR SALE

MILK BUSINESS in New Jersey with pasteurizing plant selling about 1,000 quarts milk daily. Write: M. Smith, Box 141, Union City, N. J. 1-M

MILK WANTED

WE ARE IN the market for three or four tanks of milk per week the year around. Must be New Jersey approved. Box 194, care this publication. 1-M-4

CURD WANTED

WANTED—Part Skim Curd for the Italian Trade. Attractive and Permanent. Also Fresh Whey Cheese. Address Box 201, care this publication. 1-M-t.f.

EQUIPMENT FOR SALE

FOR SALE—One 10 can Spray pasteurizer, s.s. lined, belt drive with Recorder and indicating Thermometers. Good condition. Box 197, care this publication. 1-M

FOR SALE—Bump pump No. 16 Belt drive in original crate complete with 1 H.P. motor. List price f.o.b. shipping point. Box 196, care this publication. 1-M

TWO OAKES and Burger Tornado 4 to 6 can Straightaway Washer. One available now, the other about February 1, 1946. Oatman Brothers, Inc., 735 Prairie Road, Aurora, Ill. 1-M

EQUIPMENT FOR SALE

FOR SALE—One (two bottle) specialty brass filler, stainless steel. Strainer built in cover. Excellent condition, priced right. Diversi Farms, Inc., Independence, Wis. 1-M

FOR SALE—5000 lb. Mortensen Automatic Holder with surge tank. All built of welded stainless steel. Babcock's Dairy Co., Port Huron, Mich. 1-M

FOR SALE—Copper vacuum pans compiete 4, 6 and 7 ft. Milk dryers, sizes 32x52 in., 28x72 in., 32x72 in. and 42x90 in. Storage tanks, 300 gallon vertical, 1,200 gallon vertical, 27,000 lb. rectangular, 12,500 lbs. horizontal and 1,000 gallon stainless steel truck tank. Otto Biefeld Co., Watertown, Wis. 1-M

FOR SALE—2 Glass-lined Pfaudler, 200 gallon Glass-lined Lo-Vat Pasteurizers; 1 stainless steel 300 gallon Round Pasteurizer; 1 Cabinet Cooler, 5 wings 4 ft. long—upper section 20—1 in. tubes, lower brine section 16—1 in. tubes, complete; 1 Brine cooler, 24—2 in. tubes 8 ft. long—18 in. diameter, 7 passes, capacity 10 tons; one 6,000 lb. York short time stainless steel pasteurizing system complete; 1,000 gallon Pfaudler glass lined horizontal insulated storage tank; one 1,800 gallon oval stainless steel truck tank mounted on Fruehauf trailer with D-60 International tractor, new May, 1944; 1,000 lb. Toledo suspension scale; 1,000 lb. Toledo platform scale; 2 compartment nickel weigh can, 1,000 lb. capacity; 100 gallon single shell nickel-lined receiving vat; surface cooler, tinned copper, 36 in. tubes, 6 ft. long, 2 sections with sliding covers; separator parts sterilizer; 600 lb. single compartment nickel weigh can; bottle or can cover sterilizer, capacity 500 quart bottles; stainless steel truck tanks—1,700, 1,940, 2,280, 2,350, 3,170, 3,200, 3,300 gal. capacity; sanitary milk pumps with motors, all sizes; Milwaukee Type "M" bottle filler, stainless steel bowl; one Cherry-Burrell 10-valve stainless steel filler with flat and American Seal Cappers; 250 gallon C. P. homogenizer, bronze head with motor; 400, 500 and 800 gallon New York City approved viscolizers and homogenizers, stainless steel; 3,000 ½ pint cases, 30 to the case, built pint size for good icing; McKinley straightaway can washer with cover replacer, 6 to 8 per minute, one 8 to 10, New York City approved; 8 wide rebuilt Meyer Dumore bottle washer; C. P. 3 to 4 per minute Rotary Can Washer, with motor; 200 gallon Oakes & Burger stainless steel round pasteurizer; No. 60 De Laval cream separator with motor and extra bowl; 2 No. 70 De Laval milk separators, motor driven; 1 No. 41 De Laval steam milk separator; one 6x6 York, one 6x6 Frick compressors; 50 h.p. upright boiler; 200, also 100 gallon, Cherry-Burrell spray pasteurizer, stainless steel; Mojonnier over-run tester; one 1,200 lb. Vane butter churn, practically new, motor driven; one 5x5 Lippman compressor complete; 2 Von Gunten milk filters; one 500 gallon stainless steel round C. P. multi-process vat. Sam Edelman, 321 Broadway, New York 7, N. Y. WOrth 2-4975. 1-M

BRI-TEX SAFETY FLOOR MATS

FOR DIVCO and OTHER STAND and DRIVE TRUCKS

Divco Models UM- U- ULM- S3C.W. and S4C.W. International Models M-2 and M-3, order by make and Model Number. Per doz. sets, $97.85, single set, $8.68 F.O.B. Factory.

ICE CREAM and SODA FOUNTAIN BACK-BARS

Made of carefully selected tire fabric, by patented process. Tight resilient, long wearing mat—perfect underfoot safety. For ice cream and soda fountain back-bars, industrial use in the plant, around wash tanks, freezers, machines, etc. @ 85c per sq. ft. Send diagram of area to be filled by mat or the dimensions. We will make it to your specifications. F.O.B. factory.

Write to Dept. "A" P. O. Box 1324

Sturdy wires — Drawn extra tight and fastened with stainless steel plates. Eliminates water — prevents warping.

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EQUIPMENT FOR SALE

FOR SALE — Ammonia Compressors: Worthington 7x7 single cylinder complete with condensor and receiver, $325.00 plus $125.00 for motor and switch box; Hartford 4x4½ with condensor and receiver, $175.00 plus $125.00 for motor and switch box; Creamery Package self-contained 4x4 unit compressor complete, $475.00. Smith's Model Dairy, Inc., rear 420 South 4th St., Hamburg, Pa. 1-M

FOR SALE—6 ft. Kaestner Short Time High Temperature Pasteurizer including Regenerative Section. Heater and Direct Expansion Cooler of Inconel and Stainless Steel Tubes; 200 gallon Wright Two Compartment Visco Creamvat; 6 ft. Surface coolers, 24 and 36—1 in. tubes; 12 ft. Jensen Multiple Tube Cooler, 80—1 in. White Metal Tubes; 10 ft. Cherry Internal Tubular Section, 16—1½ in. T. C. tubes; 10 ft. Cherry ditto with 2 in. T. C. Tubes; 8 ft. Combination Direct Expansion (Methyl) Cooler, 48—1 in. Tubes; 12,000 lb. Peerless Filters, Glass Coated and Stainless Steel; 1,000 lb. Two Compartment Tinned Copper Weigh Can; 500 gallon Cherry-Burrell Nickel Receiving Vat; Rotary Can Washers, 3 and 6 cans per minute; 200 gallon S. S. Lined Cheese Vat; No. 30 and No. 90 Motor Driven and No. 61 and No. 91 Steam Driven De Laval Separators; Creamery Package No. 1 Victor Junior Churn; 4½x6 Davidson Bronze Plunger Pump, variable speed drive; Model 60 Mojonnier Vacuum Filler; 4, 6, 8 and 10 Wide Soaker Type Bottle Washers; 1,000 gallon Pfaudler Vertical Jacketed Glass Lined Holding Tank; 2,700 gallon Stainless Steel Truck tank; Bronze Head Homogenizers or Viscolizers ranging in sizes from 50 to 450 gallon in capacity; 3 ft. Rogers Copper Vacuum Pan; Cherry-Burrell Vacreator, capacity 2,500 lbs. per hour; 32x100 Buffovak Double Drum dryer. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd St., New York 17, N. Y. Telephone—MUrray Hill 2-4616. 1-M

ELECTED VICE-PRESIDENT

Stewart E. Lauer, president of York Corporation, has announced the election by the board of directors of John R. Hertzler as vice-president. Mr. Hertzler, who was graduated from Lehigh University in 1927 with a B.S. degree in mechanical engineering, has spent his entire business career with York Corporation. In 1942 Mr. Hertzler accepted a commission in the United States Navy and held the rank of lieutenant commander when he was recently released to inactive duty.

His administrative ability and sales acumen and thoroughness in carrying out this task earned for him promotion to assistant general sales manager, and later general sales manager of York Corporation. In this capacity, Mr. Hertzler has under his direct supervision the full distribution of the entire line of York products.

During his 39 months with the Navy Mr. Hertzler was a liaison officer of the Army-Navy Munitions Board. He is a member of the American Society of Heating and Ventilating Engineers and the American Society of Refrigerating Engineers. He is also a member of the Tau Beta Pi honorary engineering fraternity.

DEL. DAIRY CHANGES HANDS

Seaford, Del.—The Seaford Dairy business, including the modern dairy building on King St., has been purchased from Randall C. Willin by D. Preston Lee, formerly of Seaford, and recently discharged as a major from the U. S. Army.

The dairy is regarded as one of the model plants in this section, and houses a pasteurizing unit and quarters for a retail dairy products store.

Mr. Willin expects to devote his time to the development of his herd of prize-winning Guernsey cattle at the Longacre Farms, the Willin homestead near Oak Grove. Milk from the herd will continue to be supplied to the local dairy.

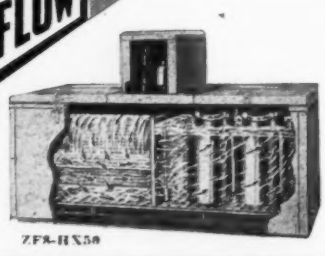
BRONX DAIRY TO BUILD

Bronx, N. Y. — A modern $500,000 plant will be built at Brook Ave. and 164th St., the Bronx, by the Crystal Dairy now located at Westchester Ave. and 152nd St. This was announced recently by Charles N. Whinston, architect, who is preparing plans for the new structure. The building will be of one and two story construction and the grade floor will cover an area of 60,000 square feet.

WILSON
SELF-CONTAINED AUTOMATIC HIGH WATER LEVEL ZERO-FLOW

STOPS MILK SPOILAGE

COOLS THE DANGER ZONE FAST



EVERYBODY GAINS WHEN YOUR DAIRYMEN "ZEROFLOW" THEIR MILK

- PRODUCERS maintain premium quality; stop losses; reduce labor.
- MILK DEALERS make life-time customers with farm-fresh low-bacteria milk.

Write NOW for details.

WILSON REFRIGERATION, Inc.
Division Wilson Cabinet Co. Smyrna, Del.

CHERRY-BURRELL GRA-VAC FILLER

The gravity-vacuum filling principle in the Gra-Vac assures accurate, uniform filling. There is no milk loss due to overfilling, leaks or damaged bottles. Each bottle is capped with a dry and securely seated cap. Your *customers* get full measure. *You* save milk *and* money.

If you will need a new filler within the next few months, we suggest you talk with your Cherry-Burrell salesman or Associate Distributor immediately. The demand for Gra-Vac Fillers is heavy. Meantime ask for Bulletin G-367.

GV-20 Gra-Vac Filler at Aines Farm Dairy, Kansas City, Mo.

GEARED TO SERVE THE DAIRY INDUSTRY

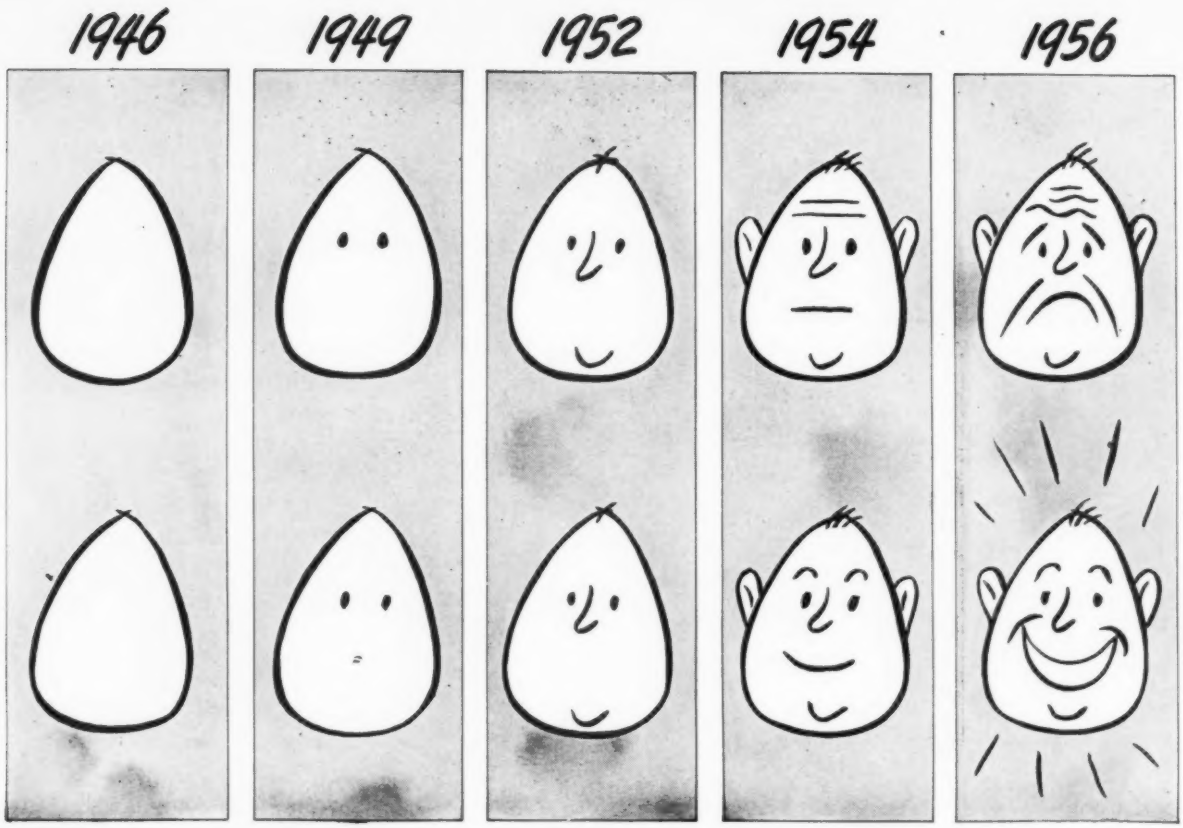
FOOD FIGHTS FOR FREEDOM

CHERRY-BURRELL CORPORATION

427 WEST RANDOLPH STREET, CHICAGO 6, ILLINOIS

Specialists in Equipment and Supplies for the Dairy Industry

FACTORIES, WAREHOUSES, BRANCHES, OFFICES OR DISTRIBUTORS AT YOUR SERVICE IN 52 CITIES



Two ways your face can grow in the next few years

USUALLY, our faces show what's happening to us. For instance, suppose financial matters are constantly on your mind.

Suppose you know that there's practically no cash reserve between you and trouble.

It would be surprising if your face didn't show it.

But suppose that, on the contrary, you've managed to get yourself on a pretty sound financial basis.

Suppose that you're putting aside part of everything you earn . . . that those dollars you save are busy earning *extra* dollars for you . . . that you have a nest egg and an emergency fund.

Naturally, your face will show *that*, too.

There's a simple and pretty accurate way to tell which way your face is going to go in the next few years:

If you are buying, regularly, and holding as many U. S. Savings Bonds as you can, you needn't worry.

Your face will be among the ones that wear a smile.

Buy all the Bonds you can... keep all the Bonds you buy

American Milk Review

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and War Advertising Council

XUM

REPLACEMENTS for your struggle with winter

NATURE does her worst to handicap milk deliveries during the tough stretch from January to mid-March.

But milk gets around regularly—thanks to the traditions of the dairy industry—in spite of snow, ice or bitter cold.

To help you maintain deliveries this winter, we are concentrating our production on making enough milk bottles for your replacement requirements. We believe that is the greatest contribution we can make to your operations now.

Later, as replacement demands dwindle, we will produce for you sufficient quantities of Handi-Squares—the famous square milk bottle with so many time-money- and labor-saving characteristics. For replacement needs and consultation before planning any change-overs, write the Dairy Container Division, Owens-Illinois Glass Company, Toledo 1, Ohio.

Duraglas DAIRY CONTAINERS

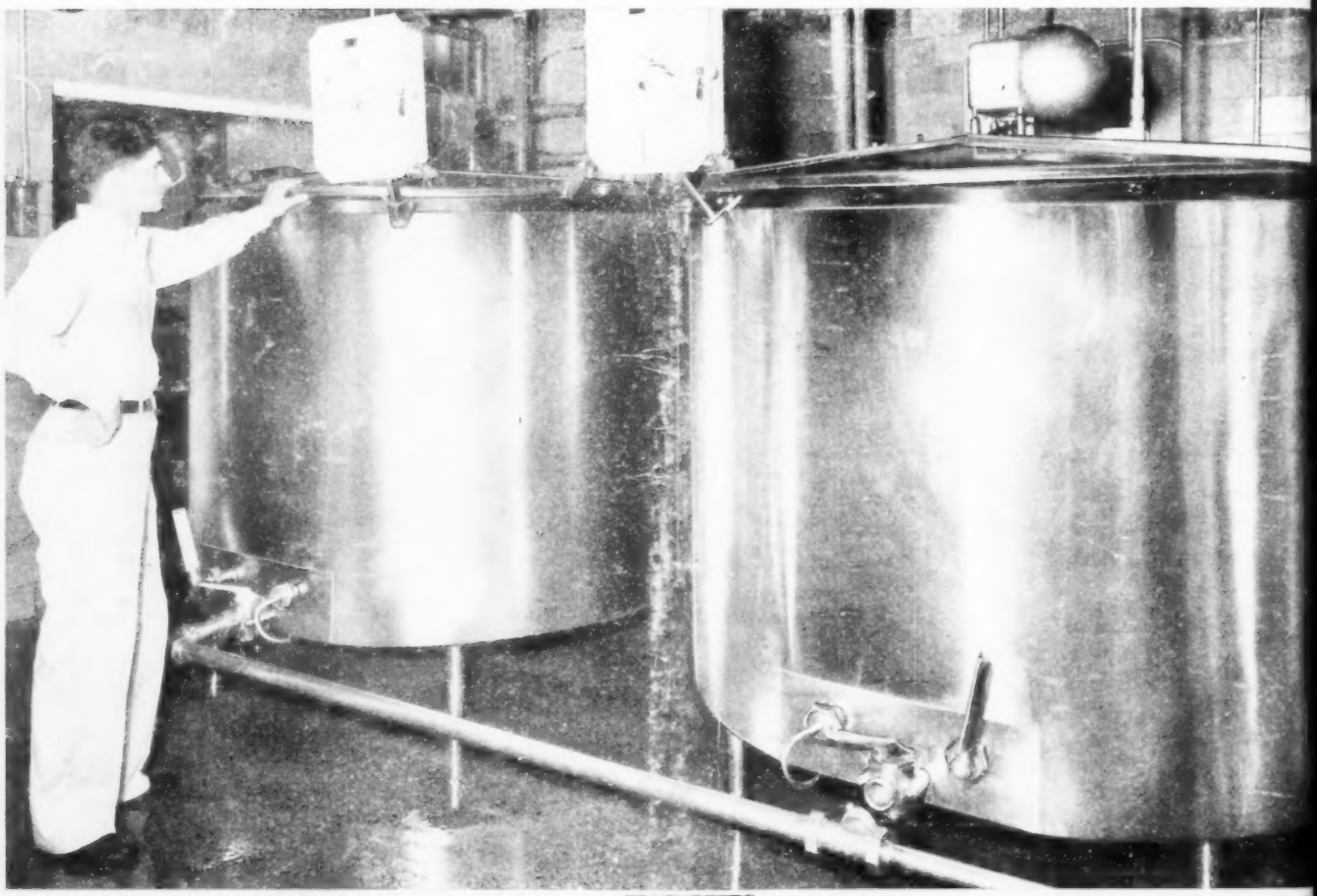
OWENS-ILLINOIS GLASS COMPANY · **TOLEDO 1, OHIO** · ***Branches in all Principal Cities***

PLANT-PROVED-PERFECT FOR *Specials!*

Every dairy has a "specials" problem where the product must be finished or partly finished in the vat. Processing methods vary, but in all cases *quick heating* and *cooling* is essential to a uniform, quality finished product. Dairymen everywhere know Mojonnier Stainless Steel Counter-Current Vats are ideal for "Specials" because of their high heating and cooling rates. They have been *plant-proved perfect* on such operations as processing buttermilk, sweetened condensed, super-heated condensed and widely used also on cream processing, ice cream mix, chocolate milk and pasteurized milk. Their all-welded construction without seams, cracks or screwed joints makes for perfect sanitation. The coil-free interior cuts cleaning time.

MOJONNIER BROS. CO., 4601 W. OHIO ST., CHICAGO 44, ILLINOIS

Mojonnier COUNTER-CURRENT VATS



MOJONNIER ENGINEERED PRODUCTS SERVE AMERICA'S FINEST PLANTS

Senior Compact Coolers | Vacuum Fillers | Vacuum Pans | Counter-Current Vats | Tubular Heat Exchangers | Bottle, Case, Can Conveyors | Processed Cheese Kettles | Milk Testers | Tubular Evaporators | Cut Wrap Machines